Operational Atmospheres: Mediating Policing in the "Fight Against Crime" and "Rural Terrorism" in Chile

by

Josefina Buschmann Mardones

B.S. Sociology, Pontificia Universidad Católica de Chile, 2013

SUBMITTED TO THE PROGRAM IN COMPARATIVE MEDIA STUDIES/WRITING IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE IN COMPARATIVE MEDIA STUDIES AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June 2019

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Signature of Author:	
	Department of Comparative Media Studies/Writing
	May 24, 2019
Certified by:	
·	Lisa Parks
	Professor, Comparative Media Studies
	Thesis Supervisor
Accepted by:	
- ,	Vivek Bald
	Director of Graduate Studies, Comparative Media Studies

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Submitted to the Department of Comparative Media Studies/Writing On May 24, 2019 in partial fulfillment of the requirements for the degree of Master of Science in Comparative Media Studies.

Abstract

From drones to predictive policing systems, there has been an increasing incorporation of new security technologies over the last years in Chile to make the fight against crime and "rural terrorism" more effective, in a context marked by a persistent attention to feelings of insecurity. Even though surrounded by an aura of neutrality, these technologies are far from neutral, as they form part of a complex sociocultural fabric of people, practices, discourses, legal frameworks and institutions. Furthermore, instead of solving problems more effectively, these technologies are complicating preexisting tensions. This thesis delves into a critical study of the contemporary anatomy of power, in which mediation processes are becoming central to policing practices, with a focus on two contexts: the fight against crime in urban areas, and the battle against "rural violence" or "terrorism" in the Mapuche indigenous territories in the south of Chile.

Drawing on media theories and governmentality studies, I offer the term *operational atmospheres* as a notion to think with and account for the composition of policing practices at the cross of vertical (aerial, orbital, and electromagnetic), algorithmic, and affective fields of actions. Operational atmospheres are entanglements of feelings, imaginaries, and discursive practices; technologies and techniques; local and transnational political economies and histories; that form perceptual systems, ways of seeing or sensing like a state which are contingent, partial and grounded on fragile and labor-intensive processes, through which they come into existence. I take as a methodological framework Donna Haraway's *situated knowledges* to locate and shed light on the processes of manufacturing state's logistics of perception and their consequences on the (re)production and government of others' spaces and subjects, in this case, the Mapuche as a "terrorist", and the criminal in urban areas.

In the context of "rural terrorism", I examine three police operations: the killing of Camilo Catrillanca by *Comando Jungla*, the fake intelligence police operation, *Operación Huracán*; and the introduction of aerial surveillance in the "red zone". Through this analysis, I shed light on the central role mediation processes play to produce imaginaries of the Mapuche as criminals and terrorists, and to sustain the development of special police operations to target, deceive and incriminate Mapuche in the context of their mobilization to recover lands and autonomy, crossing colonial pasts, neoliberal extractive presents, and global security discourses and practices. I then examine the informational, algorithmic, and unmanned aerial systems mediating *carabineros*' work in urban spaces, conceived as the location of calculable risks mobilizing preemptive actions to affect feelings of (in)security. By the implementation of a local version of CompStat, the integration of predictive policing, and the use of drones, urban policing has increasingly expanded beyond the realm of preemptive actions into the formation of "safety" ambiances, becoming atmospheric, pervasive, and affective.

More than answers, this thesis opens up contemporary mechanisms of security operating in Chile, to denaturalize and dismantle the neutrality and effectiveness attached to the implementation of new technologies in policing.

Thesis Supervisor

Lisa Parks, Professor, Comparative Media Studies

Thesis Reader

Sasha Costanza-Chock, Associate Professor of Civic Media

Acknowledgements

El proceso de investigación es un largo camino de encuentros y extravíos en el cual múltiples personas participan y acompañan la solitaria escritura. Tras esto, no queda más que agradecer a quienes hicieron posible que este texto llegara a ver la luz.

Gracias a todos los colaboradores y colaboradoras de este proyecto, quienes compartieron conmigo sus experiencias y conocimientos. En especial a quienes abrieron sus espacios íntimos y en momentos complejos me extendieron un mate y sabias palabras.

Gracias Morin Ortiz, guía y compañera en terreno. Sin ti nada de esto hubiese sido posible.

Thanks to my advisor, Lisa Parks, and to my reader, Sasha Costanza-Chock, for your invaluable guidance, kindness, and understanding.

Thanks to Open Doc Lab, especially William Uricchio for supporting me with every application process I partook, Sarah Wolozin for your encouragement and understanding, and Kat Cizek and Sandra Rodríguez for your constant inspiration.

Thanks to my fellow CMS classmates. It was a crazy journey, but you made it so much easier to travel.

Thanks to all the friends I made along the way, especially Aziria, Sara, Nicole, Juan, Seba, Zach, Caro, and Consu. You opened a little oasis in this many times cold Boston.

Gracias a mis amigos de la vida, Daniela y Francisco, por compartir tantas emociones de intelecto y vida, y ser un hogar a la distancia.

Gracias Sofía Camus por tu amistad, compañía y por la edición este largo texto.

Gracias a mi familia por apoyarme en todos los caminos que he tomado.

Gracias Manuel por todo el amor, compañía, apoyo y tanto más.

Por sobre todo, gracias a mi mamá y a mi abuela por abrirme caminos de pensamiento crítico, rodearme de libros, conversaciones, comida y cariño. Sin ustedes no estaría acá. Donde sea que estén, gracias. Las llevo conmigo.

A C. C.

De ríos a piedras cortadas, las tierras se tuercen mas no amansan.

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1. Introduction



Figure 1 Opening of the *Comando Jungla* anti-terrorist police force in Araucanía, Chile. Photograph by Cristóbal Escobar, Agencia Uno, June, 2018. Radio Biobio.



Figure 2 Opening of Sistema de Televigilancia Móvil (Mobile Telemonitoring System) in Santiago, Chile. March, 2019. El Mercurio.

1.1 Security is in the Air

The image of president Sebastián Piñera introducing new security technologies has become increasingly common in the Chilean mediascape. From drones to facial recognition systems and predictive policing software, there has been a continuous effort to spectacularly display the government's determination to keep the country "safe and peaceful". This in the context of one of the most important police crises since the return to democracy, including the embezzlement of 41.9 million dollars and the killing of Camilo Catrillanca, a young Mapuche activist. These technical systems have been used to legitimize the work of *carabineros*¹, the State's military preventive police force, by making the fight against "crime" and "rural terrorism" more "transparent" and "efficient" in a context marked by a persistent attention to the citizens' feelings of insecurity.²

Even though surrounded by an aura of neutrality, these technologies are far from neutral, as they make up part of a complex sociocultural fabric of people, practices, discourses, legal frameworks and institutions. Furthermore, these technologies introduce new obscure types of operations, difficult to account for. As predictive policing algorithms process historical police databases, they can amplify existing biases by defining zones of potential suspects and justifying illegitimate stop and frisk practices. As drones are maneuvered over predefined risk zones, they can wrongly identify and target people. And in the constant search for a total view, new devices get increasingly distributed and integrated into everyday lives, operating both visibly and covertly, imposing their buzzing presence from the air while silently parsing information gathered on the ground.

¹ The forces of public security and order in Chile are comprised of two institutions: PDI, the civil investigation police, and Carabineros, a preventive police force. Carabineros is defined as a "professional, technical security force of military nature, whose purpose is the surveillance and up keep of public security and order all over the Republic." (Reglamento de Organización de Carabineros N°1 1995, 1. Translated). It is under the command of the Ministry of Internal Affairs and Public Security.

This thesis delves into a critical study of this contemporary anatomy of power, marked by the increasing mediation of policing mobilized by feelings of insecurity and fear. I ground the research in two contexts: the fight against crime in urban areas, and the battle against "rural violence" or "terrorism" in the Mapuche indigenous territories in the south of Chile.

As complex processes of mediation shape contemporary state security apparatus, its study requires an interdisciplinary framework able to grapple with a myriad of colliding fields: from algorithmic cartographies to geopolitics; from race, indigeneity and surveillance to multispectral perception and feelings of insecurity. In this research, I draw on media theories and governmentality studies to understand how the introduction of new technologies in policing produce unique types of mediation processes, characterized by transnational imaginaries and practices in the context of crime and terrorism. In that intersection, I suggest the notion of operational atmospheres to think about and account for the processes of mediation in policing, which renders the aerial vertical field and electromagnetic spectrum operational, to sustain political and economic hegemonies. While atmosphere refers both to a vertical space of action and to a state, feeling, mood or sensation, operational denotes how police operations have become operational. In other words, they are increasingly participating in algorithmic constructions of the world to guide their everyday activities, inform their decision-making processes, and spread out their senses and presence, shaping the type of power that can be exerted by influencing what (and who) is perceived, known, and as a result, controlled, targeted, and even killed. As such, operational atmospheres participate in the construction of the conditions of possibility for life and death.

1.2 Operational Atmospheres

The *operational atmospheres* (op-atmos) concept is located at the junction of media theories and governmentality studies. It seeks to apprehend how mediation processes affect the way the state security apparatus is formed, while acknowledging the differential qualities it expresses as it is crossed by class, race, gender and ethnicity. This is particularly important for the Chilean cases I analyze in which indigeneity, race and class are key factors that shape the local structuring of powers.

In this section I outline the fields that inform op-atmos, and present a working definition, which I use to explore, think with and understand how State power is expressed in two contexts in Chile - "urban crime" and "rural terrorism" - taking into account how these particular contexts participate in global security technologies, techniques, and imaginaries, grounded in local histories and conflicts.

Atmospheres as/and Mediation

Atmosphere is a nebulous notion. A multifaceted and elusive concept, it ranges from the thin, vaporous chemical layer surrounding Earth, the Hertzian extent of the electromagnetic spectrum, to a situation's mood or feeling. It has a pervasive yet unnoticed or naturalized presence, a collective force impacting through and on particles, individuals, and environments, that can't be seen but can be sensed, in a constant process of forming and deforming. Vibrations and vibes, signals and signs, sensing and senses, atmospheres sustain life in its different realms: ecological, climatological and biological; affective, perceptual, experiential; technological; and semiotic. These complex intersections have positioned atmosphere as a rich expression to ground reflections that move beyond the binaries of human-non-human, subject-object, social-individual, material-psychical, natural-artificial, digital-analog (Anderson 2009, Adey 2010, Pink and Sumartojo 2019). In other words, "atmospheres may interrupt, disturb and haunt fixed persons, places or things" (Anderson 2009, 78), as cultural

geographer Ben Anderson affirms in his consideration of atmosphere as a good concept "to think with" (Ibid, 80).

Atmosphere is a literal condition for the possibility of life as this mix of gaseous chemical elements (mainly nitrogen and oxygen) is responsible for maintaining earth habitable. This has taken German philosopher Peter Sloterdijk to affirm that human condition is that of a "Being-in-the-air; or more exactly a Being-in-the-breathable" (2009, 48) since "air brings everything together and makes everything possible" (2005, 231). But atmosphere is only one of the multiple spheres that make the world habitable, as he suggests in his philosophy of bubbles, globes and foams, that go from micro to macro to plural, from the psychical to the terrestrial. This is as much a theory of spheres as it is a theory of media. In his words,

"the format is the message." So it's not quite the medium that is the message, as MacLuhan thought, but the format. In the jargon of radio operators, a format is first of all a type of emission. In its more common usage, a format is a standard, a dimension, a scale. (...) [A] sphere is a world formatted by its inhabitants. (Sloterdjik 2005, 232).

As he suggests, media theorists have not only focused on the signifying and representational aspects of media but on its capacity to act and be acted upon, to affect and be affected, expanding the concept towards a focus on the continuous and multiple process of mediation that shapes the world human and non-human beings inhabit. This implies not only a "theory of mediation [but] a theory of life" (2012, xv) as media scholars Sarah Kember and Joanna Zylinska suggest. They propose the notion of mediation to change the focus on media from a set of discrete artifacts such as images and screens to an understanding of the continuous process of mediation, where people's daily existence is defined by "being in, and becoming with, the technological world, our emergence and ways of intra-acting with it, as well as the acts and processes of temporality stabilizing the world into media, agents, relations, and networks" (xv).

The intertwining between media and environment is thoroughly explored by media historian and philosopher John Durham Peters, who coins the notion of *elemental media* to "regard media as

enabling environments that provide habitats for diverse forms of life, including other media". (2015, 3). For him, semiotics and environment are an inseparable process, expanding the notion of media as containers and atmospheres, grounding our existence and making it possible.

Air, once again, is at the center of his theory of media, as it is through it that communication takes place, from speech to signals, as media scholar Lisa Parks (2018) points out. She notices that across the movement of media and communication "through the atmosphere (air, airwaves) to various sites on earth", "everyday social relations take shape" (14). That is what she denominates *cultural atmospherics*, indicating both the material and figurative movements that "account for the potential of such processes to generate affects and sensations, modulate moods, reorder lifeworlds, and alter everyday spaces" (Idem).

Atmospheres designate the realms through which life is lived, sensed, designed and governed, a constant and unstable process of maintaining or disrupting the conditions for the possibility of life, the variation of affects, and the extension of a vertical field of operations - including aero-space, electromagnetic spectrum, and geological layers - for the design and government of beings and environments. Thinking with atmosphere – or to take an atmospheric perspective – when analyzing power regimes implies to take those qualities into account, examining how they are played in the government over the living and the non-living.

I want to explore a particular kind of atmosphere: operational atmospheres.

Operational Atmospheres

Atmospheres as a form of mediation take shape through the technologies and feelings that mobilize them and put them to work.

As the technological world changes, our being in and becoming with it transforms. One particularity of today's media technologies is the programmable nature of digital media, in which

images are turned into numeric data that can be modified, analyzed, reproduced, distributed, automated and generated. In short, they are not only images but computational programs. Among the media scholars who described this computational turn is Lev Manovich in *The Language of New Media*, analyzing how culture changes with the extension of "computer's ontology, epistemology, and pragmatics" (2001, 47) into everyday life, creating a "blend of human and computer meanings" (Ibid, 46), which he calls cultural transcoding.

This algorithmic turn of images (Uricchio, 2011) transforms the messiness of the world into "machine ready" (Gitelman, 2013). Images, then, are no longer representations but part of operations. Theorists Ingrid Hoelzl and Rémi Marie provide the concept of *SoftImage* to talk about this visual paradigm shift that goes from geometry to algorithm, "with the old (projection) being incrusted into the new (processing). If the convergence of vision and representation since the fifteenth century has made possible the instrumentalization of the gaze, its algorithmization has rendered the image itself operative" (2015, 3). In these operations, human gaze has been progressively set aside in the imagemaking construction and interpretation of this continuous process of industrialization of vision. Reflecting upon that condition, German artist Harun Farocki coined the term *operational images* in his video-art piece *Eye/Machine* as a way to describe how images are produced by/for machines to operate through them, focusing particularly on the role machine vision plays in the context of war and work, and on the opacity of its apparatus. French philosopher Paul Virilio, in his book *The Vision Machine* (1994) envisioned the dangers of outsourcing the decision-making process to machines, especially in surveillance and warfare contexts, due to the particular obscure nature of these systems. In his words,

Once we are definitively removed from the realm of direct or indirect observation of synthetic images created by the machine for the machine, instrumental virtual images will be for us the equivalent of what a foreigner's mental pictures already represent: an enigma ... we [humans] would be totally excluded. (1994, 60)

As a consequence, we have transformed our relation with images, transiting from looking at images to "being looked at by images", as geographer and artist Trevor Paglen (2016) states.

The problem with this narrative and the opaque mechanisms of these systems is the treatment of machine vision as an objective, unbiased tool. In practice, current operations involve multiple encounters of human and non-human agencies: not so much an emptiness of human eyes, but the intersection of multiple agencies. This is what has been described by Derek Gregory (2011) in his analysis of drone operators, and the intimacy and feeling of proximity to the terrain present on that labor.

Others have also identified how machines are far from being impartial, as they are trained using particular datasets and classification systems based on a statistical learning process designed to identify entities and patterns by building connections between points of data. This process is hidden in the middle of visible inputs and outputs, creating an abstruse black box with probable results that operate as certainties in the world we inhabit. The consequences of these procedures are not only socioeconomic and political but also fatal, as they are applied in surveillance and war. Scholars have questioned the technical neutrality attributed to computer vision technologies, which relates to the use of big data as transparent facts (see Buolamwini 2017; Cheney-Lippold 2017; Costanza-Chock 2019; Gates 2011, 2015; Gitelman 2013; Steyerl 2016).

Analyzing these entanglements, researchers Jen Eder and Charlotte Klonk propose the notion of *media operations* to designate the ways in which images act and participate in contemporary political conflicts - from warfare, contra-insurgency, to activism – where "The persons represented or addressed are to be affected in vital ways; their bodies or behaviors are to be changed" (2017, 4). These situations are activated by a complex distributed network of agencies in which "The specific potential of different media for producing, manipulating, storing, spreading and interacting with images leads to different operations." (Ibid, 5).

The combination of operations and atmospheres describe the contemporary processes of production of atmospheres connected to State power, highlighting the continuous labor-intensive

practice and the different realms in which atmospheres are used as a medium to carry out operations (both in a material and affective way), and operations become atmospherics.

To sum up, operational atmospheres are characterized by 1) a vertical space of (aerial and electromagnetic) actions; 2) participation in algorithmic processes; and 3) an affective character, interweaving the development of ambiances and feelings. They can be materialized in different ways: they can become a dynamic risk map, they can include an assemblage of flying drones connected to a satellite orbiting the earth, they can cause terror and harm in the name of "security", they can mobilize imaginaries and fears from across borders, and connect global economies.

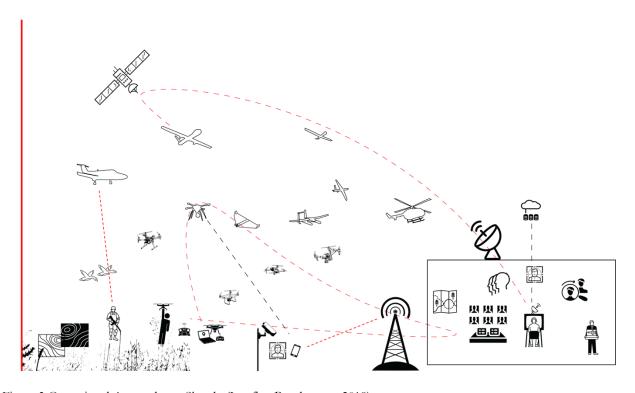


Figure 3 Operational Atmospheres Sketch. (Josefina Buschmann, 2019)

(Some of the icons used were created by Gregor Cresnar, Datacrafted, Ben Davis, Alvaro Cabrera, Nick Bluth, abdul karim, H Alberto Gongora, Viral faisalovers, ahmad, Made, Arafat Uddin, Symbolon, Oleksandr Panasovskyi, Kid Mountain, glyph.faisalovers, Juan Pablo Bravo, ProSymbols, and Jaime Yeo. Available at The Noun Project https://thenounproject.com)

Now that I have outlined the concept of op-atmos, I want to dialogue with notions of governmentality.

State security apparatus, op-atmos, and the construction of "others"

A theoretical framework for the analysis of power, in terms of mechanisms and procedures that have the role of securing power, is *Governmentality*. Attention is placed in the particular ways in which power is enacted; by whom, where and how,; according to what processes, and with what effects. At the same time, the analysis of power mechanisms implies a politics of truth, that is, a construction of knowledge. Thus, governmentality studies pay attention to specificities of knowledge and technologies that sustain power in each historical time. A change in power techniques implies a creation of a particular way of conceiving and conducting life, defining other beings' possibilities of action. This perspective is grounded on the work by French philosopher, Michel Foucault, particularly his text "Security, Territory, Population", a transcription of his 1977-78 lectures at Collège de France.

Foucault described contemporary mechanisms of power through the use of an apparatus (dispositif) of security, which is characterized by the administration of population in order to preempt, more so, "optimize a state of life" (Foucault 2003, 246). In order to regulate a state of life, "apparatuses of security work, fabricate, organize, and plan a milieu" (Foucault 2007, 21). Milieu can be understood as an environment, a medium that enables "action at a distance of one body on another (...) and the element in which it circulates" (Ibid, 20-1). It can use natural (i.e. rivers) and artificial (i.e. buildings) elements to produce security spaces.

Influenced by Foucault, geographer Peter Adey describes how, in present counterinsurgency operations in the context of war on terror, the State security apparatus has taken an atmospheric morphology, that is,

security produces atmospheres and it even becomes atmospherically distributed and immersive. Security, in short, is atmospheric. (...) [it] becomes an enveloping, overlapping, and immersive world, as it tries hard to encounter, grasp, and capture those worlds (2014, 835).

The State security apparatus both designs and becomes a pervasive force. I want to highlight two characteristics present in his notion of security atmospheres that inform the notion of op-atmos as a particular mechanism of power.

First. The central place affects take in the process of mobilizing and configuring op-atmos, particularly, the feelings of unsafety, fear, and terror. As anthropologist Joseph Masco notices in the case of war on terror, "The ability to shape public fears—to give image and form to threat—is one of the key powers of the counterterror state today, and one of its primary domains of sovereignty" (Masco 2014, 20-1). As such, security is a performative affair, a theater that crystallizes feelings into visible security measures that are not necessarily based on the calculation of risks' probabilities but on emotional reactions to these measures (Schneier 2008; 2009).

The dynamics of risks present in security mechanisms have turned from a mode based on probabilities to one of possibilities, what Louise Amoore (2013) calls *politics of possibility*. In her words, risk "does not govern by the deductive proving or disproving of scientific and statistical data but by the inductive incorporation of suspicion, imagination, and preemption" (10); which is expressed in the deployment of techniques such as biometrics, algorithmic profiling, screening and remote tracking (13). Through these mechanisms, the security apparatus turns "thoughts and ideas that had been characterized as "interior" and "unknowable" (...) "actionable and criminal", racializing targets through a recursive relationship between science and imagination" (2017, 113, 114).", as media scholar Caren Kaplan asserts (2018, 214).

Second. Politics of possibility are crossed by *politics of verticality*. Eyal Weizman (2002) coined the term to refer to the process of occupation of a 3-dimensional space - from geological layers to outer space orbits, and electromagnetic spectrum - to uphold a hegemonic position of dominance,

being the Israeli politics over Palestine the paradigmatic case. Mediation processes are key to render this field both actionable and intelligible. Lisa Parks (2018) describes as *vertical mediation*

the use of aero-orbital technologies (satellites, aircraft, transmitters) and spaces (orbit, air, spectrum) to support such activities as the international distribution of audiovisual signals, the patrolling of movements on and beneath the earth's surface, and the physical destruction and reconstruction of lifeworlds from above (...) intricately interwoven with terrestrial systems of biopower. (9)

Through these mediation processes, "others" are produced. Not all life is governed in the same way, and that depends on how some populations are classified in specific contexts and times, through identity signs such as gender, class, and race, mobilized to define risky communities and subjects, and act accordingly. That is what sociologist Simone Browne (2015) explores in her book on the deep history of the *racialization of surveillance*, what she understands as the sites and moments "when enactments of surveillance reify boundaries along racial lines, thereby reifying race, and where the outcome of this is often discriminatory and violent treatment" (8), and how race intersects other categories such as class and gender. Surveillance, then, does not fit the panoptic model as a practice of "pre-visualization" since "simulation, profiling, and prevention occur, rather than merely observation" (Browne 2015, 39).

In the context of Chile after the return to democracy, two profiles have emerged as recurrent targets of security practices: the "*urban poor criminal*", and the "*Mapuche terrorist*" (see Dammert 2012, Risør 2018, Risør and Jacob 2018). The construction of these "others" weaves local imaginaries and histories with transnational fluxes of ideas, security techniques, and political economies. That composition shapes the way in which op-atmos materializes in Chile in each of the contexts I explore, which, as I will present, is closely related to the politics of possibility and verticality mediated by the introduction of technologies and discursive practices.

1.3 Situating Operational Atmospheres

Situated knowledges

Operational atmospheres are entanglements of feelings, imaginaries, and discursive practices; technologies, techniques, and mediation processes; local and transnational political economies and histories; that form perceptual systems, ways of seeing and/or sensing which are contingent, partial and grounded on fragile and labor-intensive processes through which they come into existence. Understanding state security apparatus - and policing in particular - from this standpoint implies a methodological perspective that moves beyond the consideration of state vision as a "a god trick of seeing everything from nowhere" (Haraway 1988, 581), towards shedding light on the processes manufacturing the state's *logistics of perception* (Virilio 1989). That methodological framework is what feminist thinker and science historian Donna Haraway (1988) defines as *situated knowledges*, "partial, locatable, critical knowledges" (584) in which the mobilization of technologies are entwined with "ways of life, social orders, practices of visualization. Technologies are skilled practices. How to see? Where to see from? What limits to vision? What to see for? Whom to see with?" (587).

Ways of seeing, sensing, and acting as a state are contingent, partial, and always on the making. In order to study them, they are to be located. And although op-atmos as a particular ways of perceiving and functioning may appear as pervasive and omnipresent, they are fragile and grounded in specific elements. They are bounded to their artefacts' resolution to recognize the face of a suspect; their facial recognition systems depend on their databases to put a name on that face; they require communication systems to mobilize people on the ground to control that suspect; and so on. Despite their contingency and partial views, the effects of op-atmos are too real: they trigger and/or participate in identity controls, detentions, raids, incarceration, and killings. Their errors are lethal. As such, it is extremely necessary to open to scrutiny how these perceptual and performing state systems are manufacturing and turning the world operation ready.

This perspective implies questioning how op-atmos mobilize particular fears and imaginaries; put specific theories into motion; extend through the troposphere distinct artefacts which may be maneuvered by a police officer standing in a ground control room, sorting and organizing images or data using a pre-defined system of classification mediated by algorithmic processes signaling where (or who) to look at: from risk zones on a map to the presence of a possible suspect wandering in the streets. How is terror put to work, and whose interests does it serve? What counts as a criminal or terrorist act; for whom and when? Are some of the questions that guide this dissertation.

In order to explore the orchestration of the multifaceted composition of op-atmos in the contexts of so-called "rural terrorism" and fight against crime in urban Chile, I ground the research in particular events, finding a thread to pull and begin to untangle (Haraway in Paper Tiger Television 1989) what elements are involved and how they are configured. In the first context (rural terrorism), I analyze the development of two police operations – 1) the killing of Camilo Catrillanca by the *Comando Jungla* and 2) *Operación Huracán* -, and 3) the introduction of aerial surveillance in the "red zone" of Mapuche territories in the south of Chile. For the second context (urban crime), I analyze the introduction of three technological systems in *carabineros*, the Chilean preventive military police force: 1) the incorporation of a local version of CompStat information management system, 2) the introduction of predictive policing, and 3) the use of drones.

Whether it is a police operation or the introduction of a technology, I engage with local and transnational histories, theories and discursive practices in each particular case, as well as with the technologies and techniques themselves, by employing different methods. Between July 2018 and April 2019, I conducted interviews to different actors in Chile: two lieutenant colonels from the Criminal Analysis Department and the *Prefectura Aérea* from Carabineros, and a chief of the Citizen Security Department of Temuco Municipality; two defense attorneys of Mapuche affected by police

operations; I spoke to local activists, anthropologists, political figures, and digital experts; and visited three Mapuche families under surveillance in the south of Chile, with whom we mapped police events in their zones. I also examined press publications, legal documents, judicial processes, and Congress investigations; and examined technical artefacts and algorithmic operations used by the police. Throughout the text, I developed critical visualizations to enter the opaque realm of technology, introducing pictures and creating diagrams to open -as much as possible- these systems to scrutiny.

Throughout this process, I stepped into both spaces of hegemonic power and worlds of resistance in order to turn the State into an object of study. Still, this research has many limitations, one of the biggest ones being the impossibility to closely follow State practices from the ground. There are many things that remain unseen, especially when working in spaces of State security. But I hope this research helps as a provocation to ponder on the complex mediation processes involved in State security and policing practices, and their consequences in the construction and control of State's 'others'.

Outline

The following text is divided in two sections, each corresponding to a different context, shaped by particular geographies, histories, and issues.

The first section, Operational atmospheres and "rural terrorism", examines the central role mediation processes play in the formation of op-atmos to produce imaginaries of the Mapuche as criminals and terrorists, and to sustain the development of special police operations to target, deceive and incriminate Mapuche in the context of their mobilization to recover lands and autonomy, crossing colonial pasts, neoliberal extractive presents, and global security discourses and practices. From this perspective, I analyze three situations: 1) the killing of Camilo Catrillanca by special police force Comando Jungla; 2) the use of deception in Operación Huracán, a fraudulent police intelligence operation,

and 3) the emergence of aerial surveillance, with an emphasis on the implementation of military drones and the possibility for sousveillance.

The second section, Operational atmospheres and the fight against crime, places the analysis on the realm of urban policing and examines the introduction of three technological systems into everyday carabineros' practices: 1) the implementation of a police information management system based on New York Police Department's CompStat; 2) the development of predictive policing and the production of algorithmic risk surfaces, and 3) the use of drones to collect evidence, monitor public activities, and attempt to exert an affective capacity in the quest to control feelings of insecurity in the city. I analyze how the introduction of these technologies are transforming everyday policing into an assemblage that not only claims to prevent and control crime, but is increasingly focused on the feeling of insecurity, becoming an affective force.

2. Operational Atmospheres and "Rural Terrorism"

The bird was flying

On the afternoon of November 14th, 2018, Camilo Catrillanca (24) and his friend (15) were driving a blue tractor to get coriander from the garden of Camilo's mother to prepare nache, a traditional Mapuche plate made for special occasions with lamb blood. They were celebrating a day of working together on the construction of Camilo's house, along with four other friends in Temucuicni Tradicional, a Mapuche indigenous community located in the south of Chile, that after a process of mobilization that lasted more than ten years⁴, recovered ancestral lands previously occupied by Mininco logging company and agro-businessman René Urban. They became the community with the greatest amount of lands recovered, positioning them as an iconic site of Mapuche resistance, mobilized for the claim of their autonomy and lands, historically seized by the military invasion and colonization of the Chilean state and European settlers during the second part of the nineteenth century. A historical process known as "Pacificación de la Arancanía" (Pacification of Araucanía) or, more precisely, the military occupation of Araucanía.

About ten meters away from his mother's house in the sector of La Laguna, Camilo told his friend they should go back because "the bird was flying, for security, something may happen". That "bird" was one of the two helicopters guiding from the air a special police operation on the ground, that would end up in his murder.

From then on, a whirlwind of deceitful declarations emerged from different State actors, such as: the policemen were caught in a crossfire and acted on self-defense; Camilo Catrillanca had a

³ Narration based on the testimony by M.P.C., the 15 year-old Mapuche that survived the attack (Molina 2018).

⁴ From 1997 to 2014. Recovering 1,940 hectares from Alaska estate first in 2001; and 294 hectares from Montenegro, La Romana and Nilontraro estates from agro-businessman René Urban, and La Hijuela estate in 2014. According to Urban, former owner of Montenegro estate, the first mobilizations started in 1993 until Mininco sold in 2001 the 1,940 hectares. (Farías 2009, Cooperative 2014, Palomera and Guerrero 2014)

⁵ Narration based on the testimony by M.P.C., the 15 year-old Mapuche that survived the attack (Molina 2018).

⁶ That "bird" probably referred to the helicopter but it could also signal to the drones that were flying in the area. I was not able to confirm that.

criminal record; there were no police cameras recording the event; the images recorded were deleted by one of the officials, and so on. Day after day different contradictory information flooded the media, making the case more and more controversial, sparking a national feeling of unrest and the proliferation of social demonstrations.

This event was an atmospheric operation. On one hand, it had an important presence in mass and social media, becoming a visible sign of the irregular police operations conducted in the zone, shedding light on the choreographies of people, institutions, technologies and infrastructures involved in the place's continuous violent occupation. On the other hand, the police operation itself was a media operation. It involved maneuvering through communication systems, aerial cameras implemented in drones and helicopters, to body cameras worn by police officers on the ground. Media enabled a particular use of the vertical space. By transmitting signals through the electromagnetic spectrum, the operation was commanded from the air, affecting life on the ground. This event was both about reading signs and transmitting signals on and through the air. It was the formation of particular atmospheres, with the power of both unveiling and deceiving, resisting and killing.

Even though both Mapuche and non-Mapuche historians and anthropologists have written extensively about the intense and multiple presence of police in Mapuche territories, and the tensions between the Chilean State, settlers, neoliberal corporations and Mapuche communities⁷, little attention has been paid to the existing security technologies and techniques shaping how the state security apparatus surveils, targets, deceives, and kills Mapuche people. From the use of drones with multispectral cameras to the interception and geolocation of phone signals, mediation processes are key to the way the Chilean state is governing the so-called "red zone", crossing colonial pasts with neoliberal extractive presents. This entanglement connects local historical colonial continuities with

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⁷ See for example Antileo et al 2015; Bengoa 2017; Correa and Mella 2009; Hale 2004; Klubock 2014; Millalen et al 2006; Nahuelpan Moreno et al 2012; Pairican Padilla 2014, 2016; Richards 2010; Risør and Jacob 2018.

global security and terrorism discursive practices and techniques. In this context, I examine the mediation processes that sustain operational atmospheres to both maneuver, perceive and produce Mapuche subjects as targets, and create images of the Mapuche as criminals and terrorists.

I analyze three situations to elucidate this particular anatomy of power: 1) the killing of Camilo Catrillanca by tactical police force, *Comando Jungla*; 2) *Operación Huracán*, an intelligence police operation using deception as a strategy to script some Mapuche as terrorists and incarcerate them; and 3) aerial surveillance, with a focus on the introduction of military drones and the possibility for sousveillance. I approach the analysis on the way in which technologies were employed in the operations and the discursive practices around them, including their presentation through media and how they triggered particular atmospheres. Technologies were not only use to collect intelligence and evidence through remote sensing, interception, and scam, but also to deceive and affect public feelings and discourses.

Before delving into the three situations, I will further introduce the context and development of the "red zone".

The Red Zone

There is fear in Araucanía (...) There is terrorism in Araucanía

Andrés Chadwick, Minister of Internal Affairs and National Security

Days after the killing of Camilo Catrillanca in the hands of *Comando Jungla*, Minister of Internal Affairs and National Security, Andrés Chadwick, stated that his death was an accident caused by his unfortunate presence in "that zone". However, more than an accident, what Chadwick's words reveal

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⁸ See T13. 2018. "Gobierno Lamenta Muerte de Comunero Camilo Catrillanca y Anuncia Fiscal Exclusivo." T13. https://www.youtube.com/watch?time-continue=1264&v=4Mw9CZH-rqU, and Cámara de Diputados Televisión Chile. 2018. *Comisiones Unidas DD.HH. y Seguridad Ciudadana 19/11/2018. *https://www.youtube.com/watch?v=j7otI-vSK5g*

is the systematic production of that territory as a space of exception, the so-called "red zone", where a different form of power is operating, intentionally exposing its inhabitants to death through the orchestration of operational atmospheres. In fact, Temucuicui, Camilo's community, was at the center of the emergence of the notion of the "red zone" (zona roja), a term right-wing newspaper El Mercurio⁹ used in 9/11/2010 to describe their occupation of La Romana estate, claiming their "ancestral rights over it" But the history of the "red zone" can be traced back to colonial times and the process of military occupation by the Chilean state of the frontier.

From the initial 9 and a half million hectares that comprised Mapuche ancestral lands or Wallmapu (more precisely, the Gulumapu)¹¹– located between Biobío and Llankiwe – only 5,5% ended up as Mapuche territory after the occupation process (Marimán 2017, 121). Mapuche were enclosed in reductions (*reducciones*), which provoked a process of precarization of their lives and a forced migration to cities. In spite of this, *reducciones* were also spaces of resistance and endurance of their cultural and political organization in their remaining lands (Pairican Padilla 2017).

Lands are particularly significant for the Mapuche, a name that literally means people (che) of or from the land (mapu), for whom "land is actively involved in the making of selves" (Di Giminiani, 2016, 888), and there is a profound connection with the place of origin in the creation of selfhood. Contemporary claim for their lands is not only related to this particular ontology - this way of being in the world marked by the connection to their ancestral land -, but also to particular social structures,

⁹ El Mercurio. 2010. "Encapuchados intentaron tomarse el fundo La Romana en La Araucanía." *El Mercurio*, September 11, 2010. https://www.emol.com/noticias/nacional/2010/09/11/435677/encapuchados-intentaron-tomarse-el-fundo-la-romana-en-la-araucania.html

¹⁰ Another article published in Qué Pasa magazine (2009) signaled Temucuicui at the center of the "Mapuche war" with the Title "Journey to the heart of the Mapuche War" (Farías 2009).

¹¹ More specifically, the Gulumapu, which refers to the lands that are in what is now Chilean territory. The Puelmapu refers to the Mapuche lands to the east of the Andes mountains, what is now Argentina. Before the Spanish presence, the Gulumapu, went from the Limarí River in the north, to the Chiloé island in the south (Millalén 2017, 19). During the Spanish reign, the border was defined as the Biobio river.

and a horizontal political system of governance, along with a knowing in and from the land, a *kimin* (knowledge).

This form of being in the land opposes to the extractive uses of the territory promoted by the Chilean state, which recognize Mapuche identities as long as they don't oppose to neoliberal extractive dominant order. This context is what anthropologist Charles Hale calls *neoliberal multiculturalism*. In the context of neoliberal multicultural policies, two possible indigenous figures have appeared: the allowed and the forbidden Indian (*indio permitido* and *indio prohibido*). Charles Hales and Mapuche anthropologist Rosamel Millamán borrowed the term *indio permitido* from the Bolivian sociologist Silvia Rivera Cusicanqui to refer to

the identity category that results when neoliberal regimes actively recognize and open space for collective indigenous presence, even agency (...) The category (...) evokes echoes of past formulations, most notably in the Anglo world: the dichotomy good-noble / bad-savage (Berkhofer 1978); the Latin American counterpart might be the docile indigenous laborer in juxtaposition with the treacherous insurrectionary Indian (Hale and Millamán 2006, 284).

As a counterpart, *indio prohibido* (forbidden Indian) is the one that does not adjust to limited State policies, and in Chile crosses global security discourses, as it is embodied in the figure of the Mapuche terrorist, a figure that, in the words of anthropologists Helene Risør and Daniela Jacob (2018), sheds light on both the

post-dictatorship continuity of the dictatorship's doctrine of national security and 'protected democracy' (see also Risør 2018). On the other hand, the application of the anti-terror act against Mapuche population speaks directly to the local elite's historic fear and prejudice against the indigenous Other (see Richards 2010, 2013) (4).

The history of the *indio prohibido* in the return to democracy in Chile starts with the arson attack to trucks in Lumaco in 1997, the flame that ignited the atmosphere (Pairican Padilla 2014). The use of political violence by some Mapuche organizations as a legitimate instrument on their struggle for autonomy and territory, marked the beginning of their criminalization by the Chilean State. Since 2001, Mapuche social protests connected to their political and territorial rights were classified as terrorist actions prosecutable under the anti-terror act, a law created during Pinochet's dictatorship. This act

defines terrorism as any crime that has the goal of *producing fear* in the population. In that context, fear becomes a political asset.

Fear spread through media. In 2012 La Segunda¹² newspaper described the "the climate of violence" and "the testimonies of fear in the red zone of Araucanía", mentioning government conversations for a special security plan for the zone. In 2012, TVN national outlet developed a special report about the "red zone of Araucanía" and its violence. In 2013 La Segunda¹³ conducted a visit to the surveillance units in "the red zone of the Mapuche conflict" in Ercilla, describing the uses of armored cars, helmets, bulletproof vests, and the permanent police protection of 47 estates and houses in Malleco. By 2018, after the killing of Camilo Catrillanca La Tenera¹⁴ entitled an article "The red zone of Temucuicui", depicting the fear of peasant neighbors on this "out-of- law" zone, where Chileans "cannot enter", and not even national census can be conducted.

This climate of fear legitimized and mobilized an increasing securitization and militarization of the zone. In December 2015, during the second government period of Michelle Bachelet, a new security zone was created to confront *rural violence* ("hechos de violencia rural") in the regions of Biobio, Araucanía, and Los Ríos: Zona de Carabineros Araucanía Control Orden Público¹⁵. It was composed by two carabineros special forces (FF.EE.), another special operations section, and carabineros' aerial Araucanía section¹⁶ the military preventive state national police force. According to (now former and indicted)

La Segunda. 2012. "Testimonios del miedo en la zona roja de La Araucanía." La Segunda, July 12, 2012.
 http://www.lasegunda.com/Noticias/Politica/2012/07/767822/testimonios-del-miedo-en-la-zona-roja-de-la-araucania.
 Meza, Patricio. 2013. "Zona Roja del conflicto mapuche: Carabineros resguarda medio centenar de 'puntos fijos." La Segunda, August 13, 2013. http://www.lasegunda.com/Noticias/Nacional/2013/08/871167/zona-roja-del-conflicto-mapuche-carabineros-resguarda-medio-centenar-de-puntos-fijos.

¹⁴ Velásquez, Fredi. 2018. "La zona roja de Temucuicui." *La Tertera*, November 25, 2018. https://www.latercera.com/reportajes/noticia/la-zona-roja-temucuicui/416101/.

¹⁵ Villalobos, Bruno. 2015. "Dirección General de Carabineros: Aprueba Su Estructura Orgánica." Carabineros de Chile. http://www.carabineros.cl/transparencia/og/OG2380_03122015.pdf.

¹⁶ Its mission is to "direct, plan, coordinate and control, strategically, the operations and procedures of control and maintenance of public order and related services with the fulfillment of the mandates by Tribunales de Justicio or Ministerio Público, related to the *hechos de violencia rural (rural violence events)*, in the zones determined by the General Direction of Carabineros". (Villalobos, Bruno. 2017. "Directiva de Organización y Funcionamiento de La Zona Araucanía Control Orden Público." Carabineros de Chile.

general director of *carabineros*, Bruno Villalobos (2015), these forces would be in charge of fighting attacks, robbery of wood, and assaults on truckers.¹⁷ In the introduction of the zone was present the Minister of Internal Affairs, who emphasized the importance of convincing criminal judges (*jueces de garantía*) that the events of violence taking place in Araucanía are crimes against state's security¹⁸.

"Security of the state" signals an exceptional type of security. Along with the everyday use of force to prevent and control crime, there are other types of internal risks that are considered by the State not only a threat to society, but to the nation-state itself, and its capacity to maintain a particular order, its sovereign power. This internal enemies are seen as a national security menace to the rule of state law that must tackle with other logics to make the country "safe", another type of State security apparatus that controls the feeling of fear provoked by what has been defined as terrorism.

From January to August 2016, a Congress investigative commission was formed to examine state actions on "the feeling of unsafety that is lived in Araucanía Region" and the macro south zone¹⁹, with the goal of supervising actions taken against terrorist acts by police forces and the National Intelligence Agency (ANI), secure the free movement of trucks (*Confederación Nacional Transportes de Carga*), "repair" victims of terrorist acts, analyze possible relations with local Mapuche movements and FARC²⁰, among others.²¹

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¹⁷ Seymour, Fernando. 2015. "Carabineros Crea Nueva Zona En La Araucanía Por Robo de Madera y Ataques a Camioneros." *Diario U.Chile*, October 17, 2015. https://radio.uchile.cl/2015/10/17/carabineros-crea-nueva-zona-en-la-araucania-para-perseguir-robo-de-madera-y-atentados-a-camioneros/.

¹⁸ Ministerio del Interior y Seguridad Pública, Gobierno de Chile. 2015. "Ministro Burgos En La Araucanía: 'El Objetivo de Nuestra Presencia Acá Es Demostrar de Manera Precisa y Concreta La Preocupación de Las Autoridades Nacionales En El Área de La Seguridad." *Ministerio Del Interior y Seguridad Pública, Gobierno de Chile*, November 26, 2015. <a href="http://www.interior.gov.cl/noticias/2015/11/26/ministro-burgos-en-la-araucania-el-objetivo-de-nuestra-presencia-aca-es-demostrar-de-manera-precisa-v-concreta-la-preocupacion-de-las-autoridades-nacionales-en-el-area-de-la-seguridad/."

¹⁹ Macro south zone refers to three regions: Araucanía, Biobio and Los Ríos.

²⁰ Fuerzas Armadas Revolucionarias de Colombia—Ejército del Pueblo (The Revolutionary Armed Forces of Colombia—People's Army)

²¹ Becker, Germán. 2016. "Informa de la 'Comisión Especial Investigadores de los Actos de Gobierno en Relación con la Situación de Inseguridad que se Vive en la Región de la Araucanía." Cámara de Diputados. https://www.camara.cl/pdf.aspx?prmID=27120&prmTIPO=INFORMECOMISION.

One of the main problems acknowledged throughout this investigative commission was the impossibility of situating the attackers from "radical communities" on the police event site ("sitio del suceso"). Efforts should be placed to support special intelligence police work to collect information that could put them ahead of "criminal" actions.

In that context, former general director of *carabineros* Bruno Villalobos presented a report created by *carabineros*' Department of Criminal Analysis, on the criminal events and police actions in the zone, marking on a map with different gradations of red the most affected zones according to their data.



Ilustración 1: Distribución por comunas Afectadas 2014-2015

Fuente: Departamento de Análisis Criminal

Figure 4 Map created by Department of Criminal Analysis, Carabineros de Chile. Carabineros de Chile. 2016. "Comisión de Seguridad del Congreso Nacional, hechos asociados a Violencia Rural. Informe Nro. VR-01." https://www.camara.cl/pdf.aspx?prmID=45555&prmTIPO=DOCUMENTOCOMISION

Villalobos also presented the "operational strategies" taken, which included the introduction of a special intelligence police force operating since 2013, which would later transform into the UIOE²², an intelligence force formed in 2017 to deal with 68 "radical communities" identified by

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²² UOIE – Unidad de Inteligencia Operativa Especializada

them. The other was the introduction of new technologies: from the acquisition of drones to the implementation of georeferenced systems to perform criminal analysis and improve prevention, and the implementation of satellite phones. These tactics joined a continuous effort made since 2002 for the implementation of special means to protect agro-forest companies from "rural violence", including the creation of *juntas de vigilancia rural*²³, the implementation of armored vehicles, the expansion of FF.EE. quarters, the use of special laws²⁴, permanent protection of specific places (380 permanent protection by 2016), and the implementation of checkpoints in the area. A mixture of covert intelligence operations and spectacular permanent police presence was the State's security formula spread out on the zone, in order to protect the agro-forest industry.

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²³ Local agroupations of vigilantes, including Mapuche. Carabineros give radios and lanterns to them to stablish a better communication system. For example, in this case giving equipment to *Juntas de Vigilancia Rural* of Coihueco, Nalcaco Chumil, Solo Yo and Coihueco in IX region. They are Mapuche. They even named a carabinero mayor, a lonko, a traditional Mapuche figure representing a chief of the community. http://www.revistacarabineros.cl/assets/709 mayo 2014.pdf

²⁴ Three special laws are used: Ley 12.927 "Sobre Seguridad del Estado", Ley 18.314 "Determina conductas terroristas y fija su penalidad", Ley 19.974 de Inteligencia. The first time the anti-terror act was used against a Mapuche was in 2001. By 2010, there were 9 Mapuche convicted under the anti-terror act and another 53 prosecuted. Of these, 42 remained in preventive detention.

https://www.bbc.com/mundo/noticias/2014/08/140801 chile lev antiterrorista nc

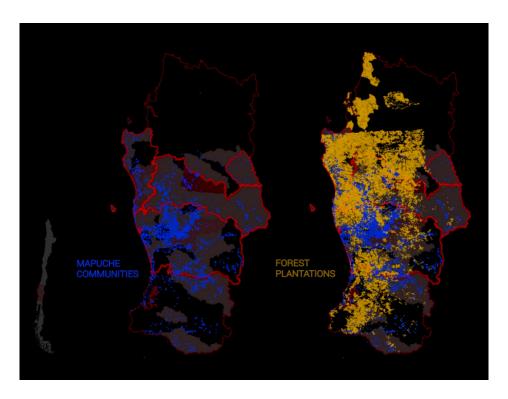


Figure 5 Location of Mapuche communities and Forest plantations (Josefina Buschmann)

Combined, these measures created what sociologist Saskia Sassen calls *Operational spaces*, where in order to protect the international movement of goods, new local borderings are placed, to "keep what is unwanted out of those strategic spaces." (Sassen 2017, 3).

To protect the free extraction and circulation of goods, a bordered red zone is created, which restricts the movement of "risky" people: suspects from radical communities, namely, the Mapuche. As such, everyone circulating there becomes a possible target that needs to be controlled. The practices of stop and frisk increase, along with the use of other surveillance technics to increment the "effectiveness" of the police. A banopticon is formed, characterized by Didier Bigo as

the exceptionalism of power (rules of emergency and their tendency to become permanent), by the way it excludes certain groups in the name of their future potential behaviour (profiling) and by the way it normalizes the non-excluded through its production of normative imperatives, the most important of which is free movement. (Bigo in Browne 2015, 24).

In the red zone, there is a racialization of risk operating under policing practices. One of the most "conflictive" spaces identified is the municipality of Ercilla, where Camilo Catrillanca lived, where Camilo Catrillanca was killed.

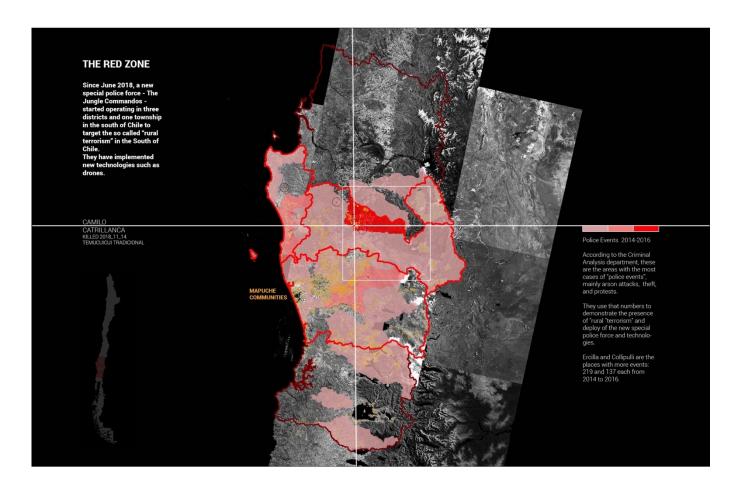


Figure 6 "Red Zone" Map and location of the site of the murder of Camilo Catrillanca. (Josefina Buschmann)

2.1 Targeting: Comando Jungla and the killing of Camilo Catrillanca

The afternoon of November 14th, 2018, former major Cristián Fernández was in the 2nd police station of Special Forces (FF.EE.) in Pailahueque, a place that used to be a polytechnic school where Camilo Catrillanca studied but that in 2016 was occupied by *carabineros* and transformed into the new special forces' location (Rojas and Bonnefont 2016).

At 16:15 that day, in Pailahueque, the major received a call from CENCO²⁵. Three cars had been stolen from teachers by three hooded men at the Santa Rosa Ancapi Ñancucheo school, in the zone of "radical communities" (Fernández 2019)²⁶. Fernández mobilized 6 armored vehicles with between four to five special police officers per vehicle (a total of 25-30 men), in direction to the "closest radical community" (Idem), that is, Temucuicui.

In parallel, another group of GOPE²⁷ was on its way. This special anti-terrorism tactical police force was introduced in the zone by president Piñera five months earlier in Temuco, with new technological equipment such as Aeryon Skyranger²⁸ military drones equipped with multispectral cameras, rangefinder binoculars, GoPro cameras, thermographic night viewers, and armored vehicles. The 80 police men would be working in the provinces of Arauco, Cautín and Malleco (where Temucuicui is located), and the municipality of Alto Biobío from July onwards, with the goal of making *carabineros' work* in the zone more effective in the fight against so-called rural violence, as part of the government's plan to "bring peace" to the Araucanía²⁹.

²⁵ CENCO: Central de Comunicaciones de carabineros (Communications Center of Carabineros)

²⁶ Declaration in the Congress Investigative Commission on the Catrillanca Case (Cámara de Diputados Televisión Chile. 2019. *Comisión Investigadora Caso Catrillanca* 18/03/2019. https://www.voutube.com/watch?v=HGzrN2z4D9Q.)

²⁷ GOPE – Grupo de Operaciones Policiales Especiales, Carabineros.

²⁸ There are 5 units of Aeryon Skyranger currently operating in Araucanía (2019)

²⁹ Ministerio del Interior y Seguridad Pública, Gobierno de Chile. 2018. "Gobierno Presenta Grupo Fuerza Especial de Tarea de Carabineros Contra El Terrorismo." *Ministerio del Interior y Seguridad Pública, Gobierno de Chile*, June 28, 2018. http://www.interior.gov.cl/noticias/2018/06/28/gobierno-presenta-grupo-fuerza-especial-de-tarea-de-carabineros-contra-el-terrorismo/.

According to former general director of *carabineros*, Hermes Soto, this special unit "seeks to anticipate events" (2018) of "rural violence". Another important element was its presence. According to Minister Andrés Chadwick, in order for the preemptive efforts to work, the police patrolling needs to be done in the "right" (armored military) vehicles in order "to be seen, felt, known" The operations conducted by *Comando Jungla* extended from the ground to the sky through a daily choreography of military technologies: patrolling critical sites of the "red zone" in their armored cars to observe, conduct identity and car controls, or just exert their visible presence; maneuver noisy helicopters in low altitude (less than 1,000 meters) and sometimes shoot rubber bullets from them; collaborate with intelligence operations developed by other police forces, including the use of drones to surveil and collect information; conduct raids and throw tear gas bombs; protect private estates; and react to every problem that could occur in the zone, including car theft and even minor cattle theft (*abigeato*). Everything was crossed by this strategically ill-defined, foggy, atmospheric force to produce a climate of terror and excessive violence, through their spectacular, everyday showcase of machinic power in the name of "peace".

This spectacular force became vernacularly known as *Comando Jungla* (Jungle Commando) due to the anti-terrorism training of some of the members in the *Jungla* training in Colombia³¹. Despite the bad reputation of this Colombian force linked to their 3,700 extra-judicial executions, known as *False Positives* (falsos positivos) (Segovia 2018), Chilean police had been conducting training courses there since 2007. Part of this and other counterterrorism training and equipment for GOPE were supported and funded by the United States, according to a WikiLeaks file³².

³⁰ Reyes, Carlos. 2018. "Gobierno Dispondrá de 160 Nuevos Vehículos Policiales Para La Macrozona Sur." *La Tercera*, May 25, 2018. https://www.latercera.com/nacional/noticia/gobierno-dispondra-160-nuevos-vehiculos-policiales-la-macrozona-sur/179914/.

³¹ Although this group was recently publicly introduced, carabineros had been cursing the Jungla training since 2007, for 1 or 5 months. The last 15 carabineros that took it did not participate in this operation, according to former general director of carabineros, Hermes Soto (2018).

³² See Figueroa, Juan Pablo. 2018. "Las Otras Huellas Del Comando Jungla." *La Tercera*, November 25, 2018. https://www.latercera.com/reportajes/noticia/las-otras-huellas-del-comando-jungla/415535/. And



Figure 7 Map Zones of Operation Comando Jungla. (Josefina Buschmann)

As the three cars stolen that November 14 afternoon were moving through the red zone, there was a full deployment of *FF.EE*. and *GOPE*: about seventy policemen, 20 armored cars³³, 2 helicopters and a drone participated in the entire operation. 406 gunshots and 150 teargas bombs³⁴. Just for the robbery of three cars.

Why? According to former major Fernández, every crime committed in "that zone" was under the category of "rural violence". As such, it needed to be treated with special operations. FF.EE. and GOPE were in charge of preventing and controlling order in complex situations such as this one, which included armed people, so *carabineros* needed special protection and a tactical approach to restore

[&]quot;The Global Intelligence Files - [Latam] Country Reports on Terrorism 2009 - W. Hemishpere." 2010. WikiLeaks. https://wikileaks.org/gifiles/docs/89/898488 -latam-country-reports-on-terrorism-2009-w-hemishpere-.html.

³³ Basadre, Pablo. 2019. "La Historia Del Día En Que Catrillanca Fue Detenido a Bordo de Un Auto Robado – CIPER Chile." *CIPER*, January 18, 2019. https://ciperchile.cl/2019/01/18/la-historia-del-dia-en-que-catrillanca-fue-detenido-a-bordo-de-un-auto-robado/.

³⁴ For a detailed description of the event, see Ramírez, Pedro, and Nicolás Sepúlveda. 2018. "La reconstrucción del crimen de Catrillanca deja en evidencia que alguien ordenó mentir." *CIPER*, December 4, 2018. https://ciperchile.cl/2018/12/04/la-reconstruccion-del-crimen-de-catrillanca-deja-en-evidencia-que-alguien-ordeno-mentir/.

the "rule of law" (Idem) in the zone of radical communities, the ones that don't allow the State to enter their territory and carry out national census, as former general director of *carabineros* Hermes Soto reminded the Congress when referring to the radical situation in Temucuicui.

Rural violence is a term that has recently become common in the press, institutional documents and discourses when referring to this context. It is difficult to define what rural violence is, but it plays a key role for deciding which forces and procedures are justified for the situation. The tricky thing is that the term does not designate a crime but a territory, as almost everything can be classified under the rubric: from *abigeato* (cattle theft), timber theft to arson attacks. According to sergeant Fernández (2019), the only elements that define it is that it happens in a particular territory and that it is related to any of the "reivindicaciones" (Mapuche reclaimed lands).

But this way of operating is not new. According to former general director of *carabineros*, Hermes Soto (2018), although now there are two new special forces in the zone, since he was deputy in Araucanía in 2003, the protocol has remained the same in the demarked zones that have been the setting of historical confrontations with *carabineros*, including the use of armored cars and, importantly, the aerial guidance of a helicopter due to the abundant forests in the area.

Circling the sky, moving on the ground

Two helicopters were part of the procedure that day, guiding the operation from the air. According to Hermes Soto (2018),

an institutional helicopter takes off (from Pailahueque) and from the air observes the movement of the three stolen vehicles and from the air commands (the operation) (...) and from the air communicates to the staff on the terrestrial movement where are the cars going and that they have them in sight and they should enter Temucuicui because that is where the vehicles are going³⁵.

³⁵ Hermes Soto declaration at the Congress Security Commission. November 21, 2018. (Cámara de Diputados Televisión Chile. 2018. *Comisión de Seguridad Ciudadana 11/21/2018*. https://www.youtube.com/watch?v=lpcRZvtrDjE.)

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The helicopter was flying higher than usual, about 1,000 meters from the ground. Five people were in the helicopter. One of them sent a WhatsApp message with the coordinates of the vehicles to the GOPE patrol on the ground³⁶. The pilot and the non-commissioned officer on the helicopter claimed to have seen two of the suspects leave the cars and get on the tractor. The aerial view was partial. Going in a right spiral, GOPE Sargent Héctor Vásquez could not see clearly. He never had a permanent, total view of the field. Furthermore, from the air, he could not recognize a specific person³⁷, since the only thing he could distinguish was a human body from an animal. But he knew that territory was "radicalized", and the people he saw walking there next to the cars were "too relaxed". They seemed like they knew the zone; they were from the zone. And people from "that zone" are classified as possible terrorists from "radicalized communities", they are suspects, they are targets. In that context, the mere distinction of a person moving calmly was enough for sergeant Vásquez to define those unrecognizable people as the criminals and therefore, targets. He communicated to the ground forces through radio that the suspects were on the blue tractor³⁸.

³⁶ Ramírez, Pedro, and Nicolás Sepúlveda. 2018. "La reconstrucción del crimen de Catrillanca deja en evidencia que alguien ordenó mentir." *CIPER*, December 4, 2018. https://ciperchile.cl/2018/12/04/la-reconstruccion-del-crimen-decatrillanca-deja-en-evidencia-que-alguien-ordeno-mentir/.

³⁷ Basadre, Pablo. 2019. "Muerte de Catrillanca: la versión falsa de los tripulantes del helicóptero." *CIPER*, January 17, 2019. https://ciperchile.cl/2019/01/17/muerte-de-catrillanca-la-version-falsa-de-los-tripulantes-del-helicoptero/.

³⁸ Declaration Sargent Vásquez in the Congress Investigative Commission on the Catrillanca Case, 2019. Cámara de (Diputados Televisión Chile. 2019. Comisión Investigadora Caso Catrillanca 04/01/2019. https://www.youtube.com/watch?v=hUsDNx4i-Vg.



Figure 8 Screenshot from the GoPro camera of Sargent Héctor Vásquez on the helicopter. (CIPER. https://ciperchile.cl/2019/01/17/muerte-de-catrillanca-la-version-falsa-de-los-tripulantes-del-helicoptero/)

Following that information, the *GOPE* policemen that got to the site first walked towards the tractor: Patricio Sepúlveda, Raúl Avila, Carlos Alarcón and Braulio Valenzuela. They located the tractor with Camilo Catrillanca and his friend. They told them to stop. They did not. The "peñi/lamngen Camilo Catrillanca continued to advance with his tractor, thus exercising with his own body his territorial control and his right to autonomy" (Huiliñir-Curio et al. 2018). As a result, in the "need" to restore the rule of law, State's hegemony over movements on that territory, over life, State forces materialized their "right to kill", shooting Camilo in the back, reproducing State's necropolitics, "the creation of *death-worlds*" (Mbembé 2003, 49), a "geopolitics of death" (Mansilla Quiñones and Melin Pehuen 2019).

That situation was not new for the community of Temucuicui in general, or for Camilo in particular who, years before, when he was a student in the Pailahueque school, he commented in an interview that

In the community of Temucuicui, to which I belong, we are having many raids, we are no longer free, we cannot walk in the hills and take care of our animals, the repression is too strong. The state is the main repressor, the one that sends Carabineros to assassinate, because we are exposed, they are throwing bullets at point-blank range³⁹.

This spectacular everyday staging of deadly power is also a media psy-op performance, as different press and news outlets -,in particular the right wing newspaper, *El Mercurio* - for years have been stigmatizing Temucuicui and profiling them as a radical criminal community, as outlaws living in the *burning spot of Araucanía's red zone*⁴⁰ that threatens the sovereignty of the Chilean State.

Media Coverage and Uncovering

After the killing, a whirlwind of deceitful declarations emerged from different State actors, such as: policemen were caught in a crossfire and acted on self-defense⁴¹; Camilo Catrillanca and his friend had a criminal record; there were no body-worn police cameras recording the event; images were taken but were deleted by one of the officials; Minister Chadwick didn't receive clear information of the 'incident' due to a supposed interference in communication with the officials, and, furthermore, president Piñera declaring that *Comando Jungla* never existed. Day after day different contradictory

³⁹ Sepúlveda, Nicolás. 2018. "Informe policial secreto: Camilo Catrillanca estaba en la mira de Carabineros." *CIPER*, November 27, 2018. https://ciperchile.cl/2018/11/27/informe-policial-secreto-camilo-catrillanca-estaba-en-la-mira-decarabineros/.

⁴⁰ See El Mercurio. 2017. "Viaje Al Interior de Temucuicui, El Enclave 'Quemante' de La Araucanía." *El Mercurio*, April 11, 2017. http://www.economiaynegocios.cl/noticias/noticias.asp?id=356662. And

El Mercurio. 2017. "Multigremial: Temucuicui Ha Recibido Del Estado Más de \$4.000 Millones En Tierras," April 21, 2017. https://www.emol.com/noticias/Nacional/2017/04/21/855054/Multigremial-Temucuicui-ha-recibido-del-Estado-mas-de-4000-millones-en-tierras.html.

⁴¹ Molina Sanhueza, Jorge. 2018. "Parte Del GOPE: 'Se Hace Uso de Armas Haciendo Disparos Disuasivos y Controlados a Lugares Seguros." *BioBioChile*, November 20, 2018.

https://www.biobiochile.cl/especial/noticias/reportajes/reportajes/reportajes/2018/11/20/parte-policial-se-hace-uso-de-armas-haciendo-disparos-disuasivos-v-controlados-a-lugares-seguros.shtml.

information flooded the media, as well as images of the operation, making the case more and more controversial, provoking a national feeling of unrest and the proliferation of social demonstrations throughout the country.



Figure 9 Screenshots from the police helmet GoPro camera videos of the operation and the agonizing body of Camilo in the blue tractor being taken by the police.

But not only the territory was a target. Camilo was a target, too. Thanks to documents published by investigative journalism outlet, CIPER⁴², it was publicly known that Camilo Catrillanca was a target of the police intelligence due to his participation in the Mapuche organization *Alianza Territorial Mapuche* (ATM). ATM was founded in 2009 (Cayuqueo 2009) to peacefully mobilize communities in the process of demanding their lands, recognition as a nation, autonomy and self-determination.

By 2009 ATM comprised 60 communities and was positioned as an important example for the Mapuche movement (Cayuqueo 2009, Pairican Padilla 2016). It was led by longko Juan Catrillanca, Camilo's grandfather, who was also an ex-member of *Ad-Mapu*, the main Mapuche organization during the eighties, and close to other important Mapuche associations such as *Consejo de Todas las Tierras* (Cayuqueo 2009). Along with longko Catrillanca, the *werken* (spokesman) of the group, Mijael Carbone, from Temucuici, and longko Alberto Curamil, were also targets. In April 29th, 2019, Longko Curamil won the Golda award, one of the most important environmental prizes, thanks to his collective power to stop the construction of 2 major hydroelectric dam projects. His daughter had to receive the prize as he is currently in prison charged with a robbery in Galvarino for which he claims innocence⁴³. The document was produced by the UIOE in the context of the *Operación Huracán*, a fraudulent "intelligence" operation I will proceed to analyze.

⁴² Sepúlveda, Nicolás. 2018. "Informe policial secreto: Camilo Catrillanca estaba en la mira de Carabineros." *CIPER*, November 27, 2018. https://ciperchile.cl/2018/11/27/informe-policial-secreto-camilo-catrillanca-estaba-en-la-mira-de-carabineros/.

⁴³ Siret, Mal. 2019. "Alberto Curamil: Chile's 'environmental Nobel' Winner Who Saved a Sacred River." *BBC News*, May 5, 2019, sec. Latin America & Caribbean. https://www.bbc.com/news/world-latin-america-48104817.

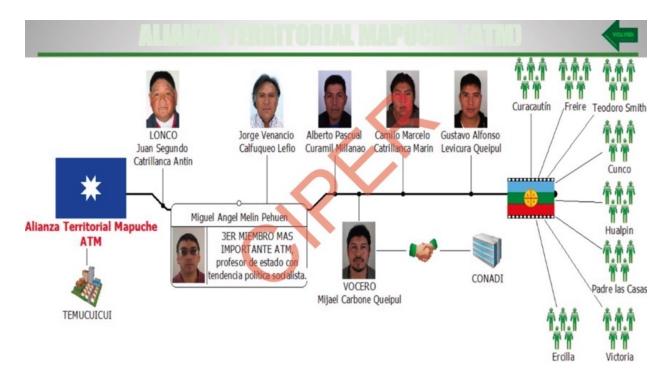


Figure 10 Police Document prepared by UIOE showing a social network analysis of ATM members and the extensions in communities in the territory. (Published by CIPER, 2018).

2.2 Deceiving: Operación Huracán



Figure 11 UIOE badge reads "Knowledge is power". The golden bull at the center is a copy of the Lamborghini car logo.

Monday, September 25th, 2017. News of *comuneros* Mapuche drowned media outlets. It was supposed to be the police event of the century, the discovery of a major terrorist network by the Specialized Operative Intelligence Unit (UIOE) of *carabineros* in the context of 'Operación Huracán'. After seven months in preventive custody, the eight Mapuche accused were released. The entire operation was a hoax.

The UIOE Tauro Araucanía was formed in 2017 to work in the macro south area (macro zona sur), gathering information of "terrorist" rural groups using special means, under the approval of the undersecretary of internal affairs. According to *El Mercurio*⁴⁴, the particularity of this unit was its "intelligence" work, able to stop and *anticipate* rural crimes in the zone. By doing so, it was able to detain 190 *suspects* of rural violence.

Operacion-Huracan-ha-detenido-a-190-sospechosos-de-violencia-rural.html.

⁴⁴ Águila, Francisco. 2017. "Nueva unidad de inteligencia que desarrolló la 'Operación Huracán' ha detenido a 190 sospechosos de violencia rural." *El Mercurio*, October 6, 2017. https://www.emol.com/noticias/Nacional/2017/10/06/878066/Nueva-unidad-de-inteligencia-que-desarrollo-la-

This unit was operating in a grey zone, at the fringes of legality (or definitely outside of it), which *allowed* them to combine criminal and intelligence procedures. If they counted with the endorsement of a judge (*Juez de garantía*) and a prosecutor (*fiscal*), they could employ invasive surveillance methods, including drone remote sensing, intercepting communications, and directly intervening devices.

Working in a clandestine house in Temuco, they intercepted hundreds of phones calls. They were not only spying on Mapuche activists but on lawyers, prosecutors, journalists, among others⁴⁵. Including Mapuexpress.org and werken.org, two important Mapuche independent media outlets.

Operation Huracán began on March 2017. By September 2017, they detained the eight Mapuche accused in different locations in the south of Chile, under the charges of illicit terrorist association (asociación ilícita terrorista). Two days after the media coverage was strong.

Leaking Media, Igniting Atmospheres

A particularity of the media coverage of *Operación Huracán* was the inclusion of images, phone audios and messages "collected" by the intelligence police unit during the investigation process, and the footage of the detention process from the body-worn police cameras. More than evidence, these media functioned as an affective force. The police had intentionally sent news outlets an "inside" view of the operation to transmit it on-air, circulating and creating a flammable public ambience. The media news operations were as important as the "evidence" itself. Through their montage maneuvers, media outlets produced veracity on what was fake evidence, and positioned Mapuche as legitimate police targets.

⁴⁵ Sepúlveda, Nicolás. 2018. "Los periodistas que fueron objeto de espionaje electrónico de Carabineros." *CIPER*, March 7, 2018. https://ciperchile.cl/2018/03/07/los-periodistas-que-fueron-objeto-de-espionaje-electronico-de-carabineros/.



Figure 12 Screenshots of T13 news report montage: fires, Mapuche as target, and animation of fake "Telegram" messages. (T13)

Through their televised montage, it was also possible to understand the infrastructures and mediation processes used by "intelligence" police operations: drones monitoring and guiding detention procedures (figure 13), and surveilling communities' ceremonies (figure 14); antennas used for the geolocation and interception of phone calls (figure 15); pamphlets to mark the will to arouse terror in the arson attack to trucks (figure 16); private surveillance cameras of a truck arson attack with a date (figure 17); and the "recreation" of messages which, in this case, "matched" the date with the one on the surveillance camera video of the truck arson attack, to present it as evidence of their guilt.



Figure 13 Police drone footage monitoring the operative on the ground, with 8 armored vehicles on the move. (T13)



Figure 14 Police drone footage surveilling a Mapuche ceremony in one of the suspects' place. (T13)



Figure 15 Cell phone antenna (T13)



Figure 16 Pamphlets (T13)



Figure 17 Private surveillance camera (Γ13)



Figure 18 Fake implanted message linked to date of surveillance video of truck arson attack (figure 17) (T13).

The most important "proof" was the "intercepted" Telegram and WhatsApp messages. T13 news created an animation to display an "intercepted conversation" between "Matute" and "Negro" regarding the preparation of an attack that was part of the fight for the Mapuche autonomy. In other text messages, there was information on weapons coming from Argentina. This information triggered a meeting between the ministers of National Security of Chile and Argentina, to plan a joint effort to tackle this binational terrorist crisis.



Figure 19 WhatsApp and Telegram, the protagonists of the story.

Even though the most "impressive" ability of the UIOE was their "capacity" to intercept encrypted WhatsApp and Telegram messages, it was also a sign that everything was an invention, a *transmedia* script assembled through different media technologies and platforms – drones, WhatsApp, Telegram, Facebook, hacking, body-worn police cameras, antennas -, and media outlets in charge of weaving all the pieces together to generate a collective animosity towards these "terrorists". Technologies were offered as forms to effectively contain terror; there was a strong effort placed in the narrative to show how technologies were working in an attempt to legitimize them on the public eye by their transmission on-air.

Lighting the Antorcha

After six months, while another police unit, PDI, was conducting the examination of the evidence of the process, they realized that Héctor Llaitul's cellphone had been connected to Internet after it was seized by the UIOE. It was the beginning of an investigation process that revealed that the messages had been implanted in Llaitul's cellphone.

A recent publication by CIPER⁴⁶ (2019) showed how the whole process was directed by the former general director of *carabineros*, Bruno Villalobos, in collaboration with *carabineros*' intelligence department⁴⁷. It was the "hacker" plan of the UIOE to implant false text messages in important Mapuche leaders' cellphones. In order to make the plan happen, they hired a "computer specialist".

That specialist was Alex Smith, who claimed to have designed *Antorcha*, a powerful software that could intercept and unencrypt WhatsApp and Telegram messages, without intervening cellphones. The software never existed. What they actually used was the Oxygen Forensics software

⁴⁶ Sepúlveda, Nicolás. 2019. "Los chats que muestran cómo el general Villalobos dirigió la trama de la 'Operación Huracán." *CIPER*, April 16, 2019. https://ciperchile.cl/2019/04/16/los-chats-que-muestran-como-el-general-villalobos-dirigio-la-trama-de-la-operacion-huracan/.

⁴⁷ Gonzalo Blu, National director of intelligence; Marcelo Teuber, UOIE chief; Patricio Marín, second corporeal in charge of UOIE; and Leonardo Osses, in charge of the informatic area.

combined with King Root software, in order to implant messages in the phones. Additionally, they made phishing scams, that is, they sent a keylogger malware to the targets to capture and record the keystrokes and send a record of them to the police. Also, they tracked social media communication of many Mapuche targets. All of these tactics were outside the law. With a judge and a prosecutor's approval, police can intercept and intervene specific cellphone or digital devices, but they cannot scam or hack them.

But it is not only legal frames or digital scripts what is at stake in this case. It is the scripting of narratives around both technological capacities and what is considered a terrorist, and how they reflect particular sociocultural ways of conceiving a tool and "other", legitimizing the mobilization of an operational atmosphere. Both combined, they produce an aesthetics of deception, shaping a socioperceptual system that sustains deceptive atmospheres.

The Aesthetics of Deception: guerrilla specters and the rest is speculation

Two elements were combined to make this deceptive operational atmosphere work and sustain the false hacking procedures⁴⁸: 1) the target profiling created by the UIOE and expanded by media outlets, that galvanized a historical national imaginary around "terrorist" figures, namely: CAM - a Mapuche organization that supports political property sabotage as a strategy on their autonomy struggle -, and communist guerrillas from dictatorship times; and 2) abstruse technologies framed as effective tools. Together, they shaped an aesthetics of deception that I proceed to explain.

1) The police created a particular story to configure a convincing terrorist profile. Two important elements come to my attention, and are condensed in the *media target profiling* of the well-known leader of CAM, Héctor Llaitul (Figure 20).

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⁴⁸ For an in-depth analysis of the technologies used see Derechos Digitales (2018) and CIPER (2018).



Figure 20 Media target profiling, highlighting criminal records and the former membership to MIR and FPMR (24 Horas).

Coordinadora de Comunidades en Conflicto Arauco Malleco⁴⁹ (CAM), is an iconic Mapuche organization whose spokesman is Héctor Llaitul. It was originated in 1997 with a politics that promoted and organized occupation of lands and the use of political sabotage of private property as means to fight for the Mapuche political autonomy and self-determination, that is, their right to decide their political, social, economic and cultural future, and their structure of government (Pairican Padilla 2016, 23). The 1997 arson attack to trucks in Lumaco opened this new era of the Mapuche movement: the era of the weychafes (warriors), as Mapuche historian Fernando Pairican Padilla calls it.

Different Mapuche organizations were on the rise at the same time, with different tactics and conceptions of autonomy, such as *Identidad Territorial Lafkenche* and *Consejo de Todas las Tierras*. But CAM became notorious due to their approach and their distributed organization in the territory, through the presence of ORTs (Órganos de Resistencia Territorial), independent resistance organs in charge of land occupations and sabotages.

Sooner than later, CAM was conceived as a major threat to the security of the state, and an intelligence police operation was put in action in 2002 to disarticulate the organization known as

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⁴⁹ Coordinator of Communities in Conflict Arauco Malleco

Operación Paciencia (Pairican Padilla 2017)⁵⁰, which also was fraudulent⁵¹. That operation started right after the killing of Alex Lemun, a 17 year-old CAM member, by a police officer. An "atmosphere of tragedy" was taking over the Mapuche issue (Idem), and CAM's discourse was being used against them, as what happened again in this operation. In Pairican's words, "it seems that [the UIOE] took advantage of an atmosphere, where the use of violence as a political instrument is validated by the Mapuche movement"⁵².

Another important element of the narrative was the connection of some of the detained with revolutionary communist organizations that were active during the dictatorship period: MIR – Movimiento Izquierdista Revolucionario, and FPMR – Frente Patriótico Manuel Rodríguez. Héctor Llaitul participated in both MIR and FPMR. Another detained, sociologist D.C., was also a member of MIR. Both organizations were considered terrorists during the dictatorship period and the beginning of democracy. These ghosts continue to hunt not only the present imaginaries of terrorism, but also the tactics. In fact, the next UIOE operation was going to be Andes Operation, in which they were "connecting" an ex-member of MIR with Llaitul and weapon trafficking between Chile and Argentina through a fake geolocalization application "Tubicacion".

2) Technologies worked as a means of deception because those opaque apparatuses were positioned as neutral and effective tools both through media coverage and the judicial system, in a context of low digital literacy in front of convoluted black boxes. The words of a lawyer I interviewed, who was the defendant of one of the accused Mapuche, are really precise to describe the situation:

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⁵⁰ In parallel, other Mapuche leaders were being criminalized and in 2001 the anti-terror act was placed against a group of longkos. ⁵⁰ Despite that persecution, the Mapuche movement continued on the rise. Over the years, different occupation of properties and arson attacks to agro-forest companies' machineries were "literally fueling the atmospheres" (Pairican Padilla 2017, 149).

⁵¹ Cayuqueo, Pedro. 2014. "Las Culpas de Ricardo Lagos." *The Clinic*, August 7, 2014. https://www.theclinic.cl/2014/08/07/las-culpas-de-ricardo-lagos/.

⁵² Pizarro, Claudio. 2018. "Fernando Pairican, Historiador Mapuche y La Operación Huracán: Bruno Villalobos Debería Renunciar." *The Clinic*, January 27, 2018. https://www.theclinic.cl/2018/01/27/fernando-pairican-historiador-mapuche-la-operacion-huracan-bruno-villalobos-deberia-renunciar/

The judges and prosecutors, who are in charge of investigating, give extra credit to new technologies, as if it was a great form of determining something; and abusing of our ignorance on how these technologies work, they establish something and then, after interiorizing and analyzing the report and content of the technology, you realize that technology doesn't say much and the rest is speculation

Furthermore, this form of operating is not particular to this case. Another famous judicial process created a similar deceptive assemblage: the Luchsinger-Mackay trial, in which a fire in the Lumahue farm ended in the killing of Swiss settlers Viviane Mackay and Werner Luchsinger during the night of January 4th, 2013. The tragic event led to the unfair persecution and incrimination of Mapuche leaders. Once again, the words of the lawyer, who was also the defendant of some of the Mapuche incriminated in this case, are enlightening,

When they detained the accused of the Luchsinger case, the main evidence was that everyone was georeferenced and, as such, they accredited that they were in a certain place where the illicit was planned. That was a condition to imprison them for more than a year and a half, a condition for media outlets to say these people are guilty because they are positioned in such space, based on an analysis of their phones and everything else. And then when we see the analysis the only thing that was there is that they were georeferenced. But that only showed that their phones that day were under an antenna that covers a 10-million square area, and that they could be anywhere inside that area. One of the places inside that zone is where the meeting to plan the attack was supposedly held, but it was also were the house of the accused was. So in the end you see that all that is presented as great evidence, abusing of our ignorance regarding these systems' functioning, after a careful analysis is diluted and is no more than a glimpse or a sign of something, and it doesn't have greater degree of certainty.

All that is solid (evidence) melts into air. All charges in the Luchsinger-Mackay case were dropped but three: José Tralcal, Luis Tralcal, and José Manuel Peralino. José and Luis Tralcal are important leaders of their communities. Luis Tralcal was also part of CAM, had to live in secrecy, and participated in a significant process of land recovery: the Santa Margarita estate previously owned by Swiss settler Jorge Luchsinger⁵³. José Tralcal, Luis's cousin, has also been continuously persecuted by the state. He had

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⁵³ For an extended analysis on the history of this place, read http://meli.mapuches.org/IMG/pdf/historia fundo santa margarita.pdf

been threatened by prosecutor Alberto Chiffelle many times before⁵⁴, who had sent *carabineros* to raid his house many times since 2001. According to his son, Juan Carlos,

The last name Tralcal weights on the state. (...) Since my childhood, I have memories of raids. They began in 2001, when I was about nine years old. At that time I normalized the violence of the raids. Back then my father was arrested for allegedly being in the occupation of the Santa Margarita estate (Tralcal, Radio Universidad de Chile 2018).⁵⁵

In this case, it was the PDI and its intelligence branch, BIPE, the one in charge of the operation which began with an antenna and a joke: the interception of a conversation between José Peralino Huinca and his girlfriend. He was ironically telling her that he was going to destroy the cell phone antenna rahue, recently installed on a hill next to the house of machi (spiritual guide or healer) Francisca Linconao. Apparently, she was mad about the installation of that antenna so close to her place, hence the joke. The BIPE started harassing Peralino, telling him that they were going to prosecute him because of that, and that he had to sign a declaration. They tortured him and he signed⁵⁶. This case was also all over the news showing how, once again, technologies were mediating and facilitating the incrimination of Mapuche leaders who have been continuously persecuted through the deployment of deceptive operational atmospheres.

I want to turn now to another way of producing op-atmos: aerial surveillance.

⁵⁴ See article https://www.eldesconcierto.cl/2019/02/26/la-obsesion-de-el-mercurio-y-el-fiscal-chifelle-los-detalles-trasla-condena-de-los-primos-tralcal-por-caso-luchsinger-mackay/

⁵⁵ Alarcón, Maximiliano. 2018. "Juan Carlos Tralcal y El Liderazgo Que No Eligió." *Diario UChile*, August 28, 2018. https://radio.uchile.cl/2018/08/29/juan-carlos-tralcal-y-el-liderazgo-que-no-eligio/.

⁵⁶ See detailed information on the unfair trials in this Amnesty International report https://www.amnestv.org/download/Documents/AMR2288622018SPANISH.PDF

2.3 Aerial Surveillance and Sousveillance

Our ancestors could tell a lot from looking at the sky. Spotting and recognizing birds provided crucial information about the weather, where to find food, and what predators were near.

(...) Drones are quickly becoming a new species in this environment.

Ruben Pater 2018, 44-5

Last night we had the visit of a drone

Last night we had the visit of a drone. It is an unfortunate situation, because even knowing that we are going through a painful and complicated process, a drone is watching us 24 hours a day, and *carabineros* are present in neighborhood roads. We are constantly monitored by a drone. We have reported it, but at the same time we are not very credible⁵⁷.

These are the words of Marcelo Catrillanca, Camilo Catrillanca's father, narrating the presence of a surveillance drone hovering over his house in Temucuicui a day after Camilo's killing. The same drone that followed his son from the air and participated in his murder, was back to hunt his night time dreams and community mourning. His description sheds light onto the complexities of drones' presence in their lives as a "new species in their environment". In the territory that took years of mobilizations to reclaim and re-inhabit, a new kind of state's vertical re-occupation is taking place, meddling with their most intimate moments with minor possibilities of confronting it or denouncing its presence, trapped in a grey zone of atmospherics operations.

⁵⁷ Arcos, Noemí. 2018. "Marcelo Catrillanca: 'Un Dron Nos Está Vigilando 24 Horas Al Día." *El Dínamo*, November 23, 2018. https://www.eldinamo.cl/reportajes/2018/11/23/marcelo-catrillanca-un-drone-nos-esta-vigilando-24-horas-al-dia/.

The appearance of drones embodies the constant effort of the Chilean state to impose their sovereign power over their lives, not so much in an effort to "discipline" them but to provoke harm, an affective presence in the pursue of exerting control over their territories and existence, and trump their practices of autonomy. As Marcelo Catrillanca narrates, the presence of drones also signals how this artefact is weaved with on- ground police operations, usually connected to extensive militarized special police operations, that can include the mobilization of helicopters, armored vehicles, tear gas and numerous armed corporals on the field. As family Torres Toro recounts (2017)⁵⁸, this not only affects adults but children who are also targets of police violence, who get frightened by the sound of helicopters and drones, elements that have become part of their drawings of the militarized landscapes inhabiting their everyday lives.

Mapuche living in the "red zone" already had to deal with on-ground police monitoring and harassment, being constantly raided, tear gassed, and incriminated. But now, on top of that, there is an increasing imposition of "terror from the air" (Sloterdijk 2009), a politics of verticality (Weizman 2002) that oppresses from the atmosphere. In this context, I center the analysis in the mediation practices taking place through aerial surveillance, with a focus on the use of remote piloted aircrafts (RPA) or drones to understand the role they play in the configuration of op-atmos.

First, I present an overview of the aerial artefacts operating in the zone, from helicopters to drones, tracing the introduction of aerial surveillance systems and examining their problematic space of operations.

I then take a different position from the previous sections, to appreciate the state from the perspectives of Mapuche communities under siege. Although I worked with Mapuche people living under surveillance, whose lives are marked by policing as a condition of life (Han 2017), this writing

⁵⁸ Silva Balcazar, Sebastián, and Yasna Mussa. 2017. "La niñez marcada: Historias de violencia policial contra la infancia mapuche." *El Desconcierto*, 2017. http://www.eldesconcierto.cl/especiales/la-ninez-marcada/.

is not about their affective experiences of the violent and pervasive state presence in their lives. It is working with them to turn the state into an object of study by placing together mine and their knowledges of state operations as a form to expose other facets of its work. What other expressions of the state security apparatus are revealed when we sousveil⁵⁹? What can we sense by looking at the sky from the perspective of the people from the land?

⁵⁹ Sousveillance is a term denoting the possibility of counter-surveilling the state, to watch it from below.

Aerial surveillance, Fires, and State of Emergency as State of Exception

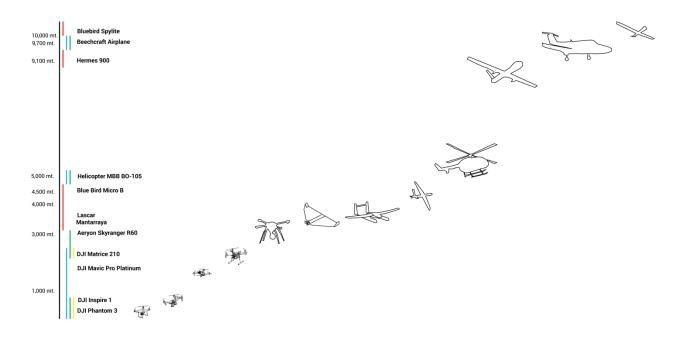


Figure 21 Diagram of aerial remote sensing systems of state and citizen security forces in Chile. Municipalities (yellow), Carabineros (green), PDI (blue), and Military Forces (red). Missing in this diagram is the Fasat Charlie satellite orbiting around the earth at 620 km (low earth orbit), obtaining high resolution multispectral images. The scale of drones is not strictly proportional. Another drone that may be owned by the state is the Elbit Skylark. The information I found was not clear on that case so I did not include it in the diagram. Finally, there are a myriad of drone prototypes built by the Chilean Air Force that I did not include as I don't know about their current operability and I did not receive any information on their uses⁶⁰. Sources: interviews, promotional videos, press publications, and acquisition documents. (Josefina Buschmann, 2019)

The use of the vertical field as a tool to impose a political and economic regime through terror is not strange to Chile, as the first materialization of a long-standing dictatorship that introduced a radical neoliberal transformation into the country were six military Hawker Hunter planes bombing the house of government a 9/11/73, ending with the *road to socialism* of president Salvador Allende. In the Araucanía context, the use of helicopters has been common in police operations as a "counterterrorist" tactic. There are memories from dictatorship times when bodies of "communists" were

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⁶⁰ To view different Chilean military drone's prototypes visit this website: https://web.archive.org/web/20170320014952/http://www.dronesdelsur.org/industria/chile/

thrown out of helicopters into the sea close to Puerto Saavedra's coast, vanishing into the ocean. More recently, helicopters have become a constant presence over mobilized Mapuche communities to guide operations, target and kill, as in Camilo Catrillanca's case. Helicopters have also been used as a tool of torture. In 2009⁶¹ for example, a 14-year-old Mapuche boy walking out of his community located at the border of a estate that was being reclaimed as ancestral land, was hit with pellets (*perdigones*) by a group of *G.O.P.E.*, and then taken into a helicopter flying low, where they threatened to throw him out of it if he did not give them the "information" they needed. A situation that shows the continuity of dictatorship security practices, but now certain Mapuche in specific places are targets.

Since 2012, another aerial presence appeared in the "red zone": a spy plane ("avión vigía"). According to some, it flew over route 5 South (5 Sur) -the main highway that crosses the country from North to the South -, especially covering the zones of Pidima, Ercilla, Rofue, and Trapiwe, where Mapuche communities along with monocultures, are located. It was usually seen flying when there were arson attacks to trucks during the night. People from the communities could observe its "photo flash". In December 2013 the spy plane officially arrived to Araucanía with the goal of supporting the work of carabineros in making the fight against "violence" in the region more effective. "These aero vehicles equipped with cameras, allow film and photographic fixation of places or people, and on this basis, to proceed with more certain results than doing them [the operations] from the ground" for affirmed general inspector of carabineros Jorge Rojas in 2014. It was originally introduced in 2009 to monitor movements in the Northern frontier as part of Michelle Bachelet's plan Frontera Segura (Safe Border). It was then mobilized to this internal frontier, the historical frontier of the Mapuche's territories, reconfigured as a "red zone".

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⁶¹ See document https://es.slideshare.net/ETNILUMIDAD/medida-cautelar-comunidades-temucuicui-y-rofue

⁶² Baeza Palavecino, Angélica. 2014. "Carabineros Asegura Que Avión y Helicóptero Vigía En La Araucanía 'Han Aportado Muchos Resultados." *La Tercera*, February 3, 2014. https://www.latercera.com/noticia/carabineros-asegura-que-avion-y-helicoptero-vigia-en-la-araucania-han-aportado-muchos-resultados/.

This "fixation" of targets is done with the FLIR Star Safire II camera, mounted on the King Air Beechcraft B200 number C-52 police airplane, with a maximum flight altitude of 9,700 meters. The camera - which according to the US manufacturer is used in 25 countries around the world -, has color video, and a 640x480 resolution 29x zoom thermal sensor, with "ISTAR capabilities" (intelligence, surveillance, target acquisition and reconnaissance) in the range of 10 kilometers⁶³. At night, police uses the thermal sensor that allows to identify the heat radiation of bodies, objects, materials and any changes on heat radiation in the environment. Thermal sensors are based on the infrared energy of the electromagnetic spectrum to produce images from heat, not from visible light⁶⁴. This affordance allows police to extend their perception during nighttime by creating heat signatures, and follow people defined as targets. With these characteristics, it can fly without being seen during day and night, and conduct intelligence surveillance operations. The thermal sensor is really important for the "security" practices in which the airplane is employed. On one hand, it is focused on the detection of arson attacks and "probable suspects" that cause them. Fires provoke heat signatures easily detectable by this camera. On the other hand, as the terrain is characterized by large and forested areas, this sensor facilitates following targets under those conditions.

In spite of these capabilities, the view of this camera is limited. It is difficult to actually identify a specific person from above, which becomes impossible at night. The only images that can be rendered are the spectral appearance of white figures moving on the field. As such, the most important thing is where these planes are flying, as well as the terrain and "intelligence" information previously

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https://www.biobiochile.cl/noticias/2009/09/07/carabineros-estrena-helicoptero-con-camara-especial-para-captar-en-la-oscuridad-a-personas.shtml

https://www.wescam.com/products-services/airborne-surveillance-and-reconnaissance/mx-15

https://www.youtube.com/watch?v=XE4y3PArOmw

^{63 1} PDI helicopter also includes the Flir camera. According to Revista Detective (n°141, 2009), the Flir camera has a cost of 100 million Chilean pesos. In carabineros, there was a helicopter from carabineros that also included a different thermal sensor L3 Wescam MX-15. Which is similar to the Flir camera. Due to a recent accident, that helicopter and camera are now lost. That same sensor is mounted on the Chilean Air Force Hermes 900 drone. See

⁶⁴ For more information on how thermal imagery works, visit https://www.dronezon.com/learn-about-drones-quadcopters/9-heat-vision-cameras-for-drones-and-how-thermal-imaging-works

gathered, which define their "objectives" rather than a clean perception from the sky. That makes the participation of these systems in the construction of operational atmospheres particularly problematic when employed in a zone where suspects are racialized, where the predefined targets can easily be Mapuche. These blurry images can be put to work as part of any narrative as objective, neutral, evidence, while maintaining the reproduction of a racialized view at its center, sustaining a hegemonic order over that territory by continuously incriminating its inhabitants in the name of "safety" and "peace". They can form part of an aesthetics of deception that produces new visualizations of the "indigenous other". That is what happened, for example, when they used thermal images as part of the (fake) intelligence procedure *Operación Huracán*, and presented them in *24 Horas* central news with the following description:

They call it the king of the air. Patrolling is its specialty, and the technology it uses allows a precise surveillance (...) [The thermal sensor] is a very useful application in lands with abundant forests and also in nighttime operations. In fact, after the last truck's burnings in Araucanía, this [aerial] operation was launched, which caught several intentional arsons, relevant data that led to 'Operación Huracán', where eight Mapuche comuneros were arrested. (2017)

In the thermal images depicted (Figure 22 and 23) it is only possible to show the contours of bodies moving on the ground as white blurs over the gray background. There is no other element connecting those blurs to the alleged "Mapuche terrorists", other than the news edition. These blurs could have been anyone, even police running on the field captured with thermal sensors, to script in them anyone as a terrorist; as they actually did with all the other media operations employed as part of their mediated aesthetics of deception, in which spectral images embody the Mapuche-insurrectionary-communist-terrorist ghosts crafted by the state, through operational atmospheres.



Figure 22 Thermal image from Flir Star Safire multispectral camera following 2 targets (heat signatures of bodies) supposedly "suspects" of terrorist arson attacks in Araucanía, as part of *Operación Huracán*. Screenshot taken from a news on *carabineros*' aerial operations (24 Horas, 2017).











Figure 23 Flir Star Safire multispectral camera, which is mounted on the Beechcraft airplane (left top) used in the northern Chilean frontier (left bottom) and in Araucanía. The thermal images from the right are supposedly following targets in Araucanía as part of *Operación Huracán*. Images are screenshots taken from a news on aerial *carabineros*' operations (24 Horas, 2017).

In the Summer of 2019, the plane was back in action and participated in the arrest of 64 "subjects" ⁶⁵ accused of the extensive fires occurring in Araucanía. These fires were not explained as a consequence of the political economies of monoculture pine plantations in the zone but as the result of the actions of "radicalized groups". As such, an exception state (*Estado de Excepción Constitucional*) was declared by the government, to contain the focus of fires by constraining the movement of people, through the use of military forces during 2 months in the "red zone" ⁶⁶. Around 7,000 forces were mobilized, including *carabineros* and PDI, to help "increase the feeling of safety in the zone" ⁶⁷ through

⁶⁵ Ufro Medios. 2019. "Avión Vigía de Carabineros Se Retira de La Araucanía Tras 3 Meses de Trabajo En Incendios Forestales." Ufro Visión. https://www.youtube.com/watch?v=Mg_GHFjYgAA.

⁶⁶ Zamorano, Rodrigo. 2019. "Sobre 7 mil efectivos de las Fuerzas Armadas se movilizaron en la Región." *Austral Temuco*, April 7, 2019. http://www.australtemuco.cl/impresa/2019/04/07/full/cuerpo-principal/2/. ⁶⁷ Idem.

the use of aerial and terrestrial patrols and controls. The environmental state of emergency gave way to a militarized state of exception operating through technologies extended across the atmosphere to "contain" feelings.



Figure 24 Images from Flir Star Safire multispectral camera mounted on the Beechcraft airplane in an operative during the 2019 Summer fires in Araucanía, that led to the arrest of 64 suspects of arson attacks. (*Carabineros*, February 2019).

While the situation I am describing is grounded in Chile, it is connected with transnational discourses and practices on counterterrorism. In the context of the U.S. war on terror, media scholar Lisa Parks has described the problematic configuration of "spectral subjects" through the

"visualizations of temperature data that take on the biophysical contours of a human body while its surface appearance remains invisible and its identity unknown (...) The effect of this vertical remediation of racial difference is to mainstay counterterrorism as a social order. For it is precisely the issue of not being able to verify or confirm the identities of suspects that fuels counterterrorism as a paradigm and drone warfare as its method. The recording of racial difference as thermal abstraction thus becomes infrastructural as it rationalizes and drives the militarized drone economy" (2017, 145).

This transformation of heat data into racialized terrorist signs, or the transduction of heat radiations into "Mapuche terrorists", is connected with the participation of the Chilean state in global understandings, practices and military security political economies of counter-terrorism, advanced mainly by the United States and Israel, in which aerial technologies have been positioned as a key tool

to keep countries secure of internal and external "threats", especially one particular aerial technology: unmanned aerial vehicles (UAV) or drones.

Not only the spy plane was present during the 2019 Summer fires. For the first time, two of the three military UAV, *Hermes 900*, owned by the Chilean Air Force (FACh), were publicly displayed and sent to the Maquehue air base in Araucanía to "help with the fire emergency". These drones were purchased in 2011 to an Israeli company, Elbit systems, for 40 million dollars, becoming the first export of this model outside Israel. Before that, other two similar Elbit system models were procured by Brazil, the *Hermes 450*, to "monitor" activities in the Amazon. The Hermes 900 is a mediumaltitude, long-endurance drone with a span of 15 meters. It can maintain a static position for 30 hours, and fly in an altitude of 9,700 meters. As a sensor it carries the L3 Wescam MX-1569, a thermal and color video that works in a similar way to the spy plane's FLIR camera, sending real-time images to a ground base control room. This drone can also carry and fire missiles.

⁶⁸ https://www.infodefensa.com/latam/2019/02/25/noticia-fuerza-aerea-chile-envia-flota-hermes-contra-fuego.html

⁶⁹ See https://www.biobiochile.cl/noticias/2009/09/07/carabineros-estrena-helicoptero-con-camara-especial-para-captar-en-la-oscuridad-a-personas.shtml

https://www.wescam.com/products-services/airborne-surveillance-and-reconnaissance/mx-15



Figure 25 Hermes 900 in Quinteros Aerial base presented, by the Defense Minister, Alberto Espina (FAch 2019)

The acquisition of this drone is somehow connected to another natural disaster in Chile: the massive earthquake of 2010, with an epicenter close to Concepción, in southern Chile. A state of emergency was declared, the military were out, and two Aerostar drones were borrowed by the FACh from the Israeli company, Advanced Defense Systems. Not only they were used to survey the damages in the infrastructures and land, but also to monitor the behavior of the affected people so they didn't loiter or occupy private lands; participating in the restitution of order in the middle of this natural disaster chaos. Since then, a series of trips from government actors, private institutions and organizations were made to Israel to see their aerial technologies in person, according to an article published by *El Ciudadano* (2012). In 2011 the deal was closed and the Hermes 900 were ordered.

Environmental disasters legitimize and permit the insertion of military technologies into the civic realm of "public order control". In addition, due to the multiple activities a drone can mediate - from the search and rescue of people, geographical survey of the landscape, monitor volcano activities

to the protection of the border, fight drug trafficking and "terrorism"— it opens a gray zone of operations that can easily blur the frontiers between military and policing securitization processes.

Another reason environmental disasters legitimize and permit the inclusion of military drones is that it puts existing laws into motion to frame its uses. As noted by geographer Derek Gregory (2017) in the case of the use of drones in the FATA⁷⁰, where the U.S. drones operations are not out of the law but inserted to it, and play within a myriad of legal frames, a "legal apparatus that makes it *permissible*" (44). In the case of Chile, the interplay of an anti-terror act, intelligence laws, and environmental exception status, allow to legally introduce exceptional technologies that, once incorporated, become part of the everyday landscape, making up the operational infrastructures that mediate internal conflicts. In this context, the formation of op-atmos is intrinsically connected to environmental risks such as fires, as they open an exceptional realm of actions. The fires fuel the development of increasingly militarized and exceptional op-atmos that then become permanent, "blurring the distinction between military and police operations" (Gregory 2017, 44).

From then onwards, other drones silently began to populate the red skies of Araucanía. In 2013, "weird planes" were seen soaring over the Gulumapu⁷¹. Local Mapuche people affirmed to have seen a small, weird plane that did not fly for a long time, and that was launched from a nearby hill. For them, the introduction of this UAV in the zone was connected to the killing of GOPE sergeant Hugo Albornoz in the area in 2012, which became more militarized after that event, and new technology was introduced, including a bulletproof body vest and new armored vehicles. Around the same time, Chilean organization *Derechos Digitales* (2014) detected the acquisition of Bluebird Israeli military UAVs *Spylite* and *Micro B* by the Chilean air force. The Bluebird models Spylite and Micro B can fly for 4 and 2 hours respectively, with a maximum altitude of 10 km and 1 km each.

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⁷⁰ Federally Administered Tribal Area in Pakistan

⁷¹ Twitter José Ancalao, 2013

In 2015, a Mapuche community collected several pictures they took in their territories to present in an appeal for legal protection against the increasing militarization of the zone, including one with what looks like the Spylite MicroB (Figure 26). That model includes color video and thermal images, but what is particular about it is that it can be launched from anywhere (Figure 27), it resists extreme weather conditions, and can conduct covert "ISTAR" operations⁷². This further distributed the presence of drones in the territories, closer to the land, where people can sense them.

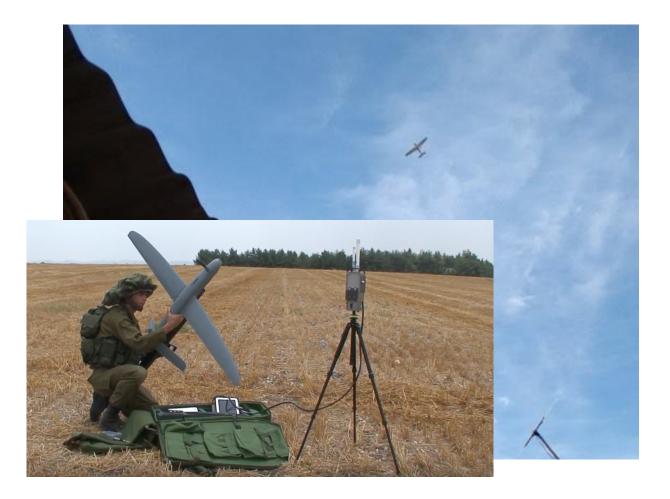


Figure 26 (In front) Screenshot of a Bluebird MicroB promotional video. https://www.youtube.com/watch?v=aLiMDy5Rppk

Figure 27 (Behind) Photograph taken in 2015 by a Mapuche community under surveillance, used as evidence of police presence for an appeal for legal protection.

⁷² See http://www.bluebird-uav.com/microb/

On the same note, more recently, a number of small quadcopter drones have been implemented in the operations of *carabineros* and PDI in the zone. From a range of civilian Chinese DJI drone models⁷³ to five units of military U.S.-made Aeryon Skyranger presented with *Comando Jungla*, the aerial panorama is getting rapidly populated. In contrast with the UAV models previously introduced, these ones fly lower, more visible and noisier. According to a lieutenant colonel from *Prefectura Aérea* I interviewed, these drones form part of intelligence practices, criminal investigation, and are useful for decision-making in the midst of operations. They can also detect faces, especially Aeryon Skyranger which is the most advanced: it can fly for 40 minutes, with a maximum altitude of 3,000 meters, in an operational range of 80 kilometers. It has a wider range of actions and a better resolution than the DJI ones, including thermal sensors and a zoom able to recognize faces from 300 meters away.



Figure 28 Aeryon Skyranger system of functions and screenshots of a promotional video showing its capabilities. (Aeryon)

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⁷³ DJI Phantom, DJI Inspire, DJI Matrice 210, and DJI Mavic Platinum Pro.



Figure 29 Aeryon Skyranger image from the presentation of Comando Jungla, 2018 (T13)

In the case of the DJI, the Matrice 210 was the one more recently incorporated one to *carabineros*' work. It has a zoom of 30X and 50X in digital form, with thermal and video cameras; a flight autonomy of 25-30 minutes. They have a flight distance of 7 km in the horizontal and 3 kilometers in the vertical.



Figure 30 DJI Matrice 210 (left) and DJI Inspire 1 (center) in PDI training for the program Microtráfico Cero (M0). These are some of the same models used by *carabineros*. (PDI)

Due to the characteristics of these smaller drones and forms of operating, it is possible to observe them and follow their movements as they drift between shady lands, making unexpected uses of space beyond the institutionalized aerial landing of the police quarters visible.



Figure 31 A drone used by GOPE to monitor a Mapuche community. (Fernando Lavoz 2019)

Sensing from the ground

On three different afternoons, I visited different Mapuche families under surveillance. We walked, talked, photographed, and mapped particular surveillance events based on their memories and, in one case, recreated one of the surveillance scenes.

The main focus was the presence of drones in their surroundings, which is something that has recently started happening, in contrast with police raids and the interception of phone calls. What is particularly interesting in the case of drones is that, unlike signal interception, which is almost completely imperceptible - even though they know every antenna in their surroundings and every phone in the area is being monitored-, and in contrast with the direct invasive presence of police raids, the drones are located in a grey zone, where they can be looked back from a distance. Due to the characteristics of the quadcopter drones used, such as the short-range distance from the operator and their noisy presence, and the forest geography of their spaces, the devices get close enough to be sensed. Most of the time, they announce their presence through their sound, or their arrival is announced by dogs barking. Other times, when they come at night, the drone turns its lights on. In their movements, they make unusual occupations of the land and networks of people supporting their operations that are inherently grounded in the earth visible. By observing the sky together, we turned the state into an object of study.



Figure 32 Situation 1. Drones and map of drones movements. Drones identified circled in red.(Josefina Buschmann 2019)

In the first place I visited, detecting a drone was not an everyday thing. It was an event that clearly signaled the presence of police in the area. They had recognized the presence of a drone five times in total in the past couple of months. It was the Aeryon Skyranger, recently introduced with *Comando Jungla*. Different elements were revealed each time they saw it.

The first time one of them heard it hovering at midday. They turned around and saw it on top of a poplar. Later that day, a red truck with no plate passed near the house with three plainclothes police they recognized from other circumstances.

The second time it came by night. They noticed the light of the drone flying low, at the entrance of the house. They went out and watched it go to a nearby school, where it landed.

The third time was on the afternoon the event took place. They saw the drone flying low, close to an abandoned shed nearby. The dogs were barking. They approached it and found a suspicious neighbor in the site, walking fast to leave the place. When they were returning home, they caught two men lying on the ground, covering their faces, who immediately run away. They ran after them and a black Tundra wagon appeared and picked them up. They filmed everything with their cellphones to register it. Later that day, the drone returned and continued hovering around for half an hour. We recreated this scene through the fields.



Figure 33 Recreating the position of the two policemen hiding in the bushes near the house.

Through the exercise of mapping and performing memories of drone encounters, we could identify first, the model of the drones. By doing so, we could infer that *Comando Jungla* was possibly being part of the operations, as the drone models were recently introduced in that force. Second, we were able to analyze how police are moving between their lands and the adjacent fields, to discover that they turn unoccupied empty spaces and rural schools into their operation bases. Finally, there are local Mapuche neighbors, voluntary or forced, cooperating with the police.

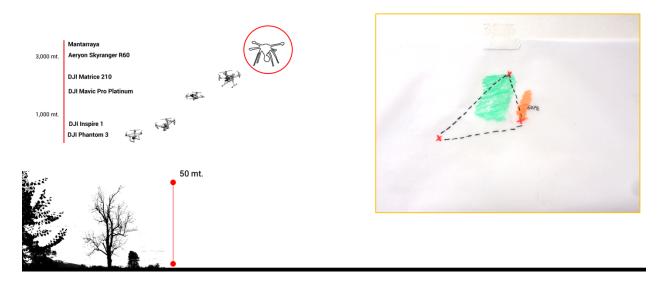


Figure 34 Situation 2. Drones and Map of drone patterns of surveillance. Drones identified circled in red.(Josefina Buschmann)

In the second place, drone surveillance was more intense. The lands bordered a protected estate where a GOPE post was installed, with a daily routine of 7x7 described as 7 policemen per shift, changing shifts at 8 am and 8 pm approximately. The drone was integrated in these daily cycles. When the sun went down, they turned on the light focus of the house where *carabineros* are located. The drone appeared shortly after, buzzing around with two red and green lights, the characteristic colors of *carabineros*. It was also an Aeryon Skyranger. Its route repeated a triangular pattern, starting at the

post, then flying towards their house, ending in a nearby shed. The altitude of the flight was about 50 meters, and it usually flies slowly, in an attempt to carefully survey the field to see if there is anything "suspicious", out of order. Most of the time, it relies on its thermal sensors for the detection of a suspect. When in doubt, the drone stops and a white light appears, like a camera flash, making the corporeality of the possible target visible.

Through this everyday choreography, the drone was constantly reinforcing the ground borders through the air. It produces an op-atmo that demarcates not only of the preeminence of the Chilean state over their territories, but of the landowners of the zone, and the protection of their "right" to extract these lands. Through their movement, drones are participating in the reinforcing of current political and economic order over the emergence of possible Mapuche others, that threaten it by claiming back their ancestral lands.

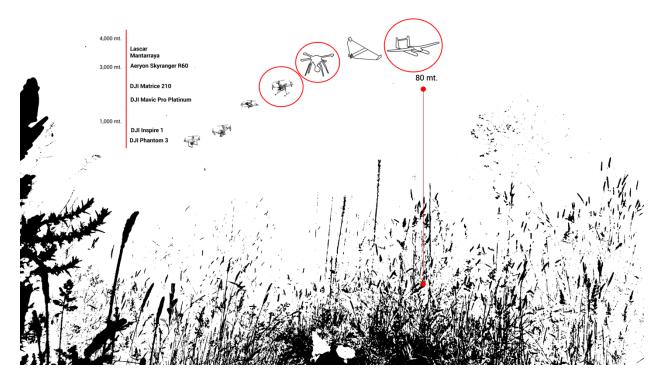


Figure 35 Situation 3. Drones identified circled in red. (Josefina Buschmann)

On the third place I visited, the surveillance was not constant, but the times they caught an eye on drones were very insightful. First, a new drone was identified: Lascar. This model is produced by the Chilean Air Force, in collaboration with Universidad de Concepción. In 2014, due to a failure, it crashed onto a house in Hualpen. The presence of this UAV is relevant because it indicates that not only the police is surveilling the zone, but possibly the FAch, which is consistent with the observations of other Mapuche of the zone, as presented in the first photograph from 2015. It could also indicate that police are using equipment borrowed from the air force. This fact is important not only because it is illegal to use military forces against citizens under normal conditions. It is also relevant because it reveals a greater display of forces in the place, operating outside the law. The Mapuche mobilized are being systematically treated as dangerous others, and military strategies are employed to restrain them.

Finally, I must say that many aerial and other operations remain usually unseen. It is possible to move the spy plane at an invisible altitude. The Hermes 900 can fly 30 hours over a fixed point at an altitude of 5,000 kilometers. And even commercial drones used by the police are becoming increasingly unnoticed: for example, the DJI Mavic pro's sound is almost imperceptible, and it is one of the PDI's new drones. It is necessary then to be constantly looking for ways to bring those artefacts, and the assemblages around them, into the public light.

In summary, op-atmos in the context of "rural terrorism"

Throughout this chapter, I examined the mediation processes of policing, in the context of the fight against "rural terrorism" in Araucanía. By analyzing two police operations and the introduction of aerial surveillance, I shed light onto how op-atmos take part in the construction of the Mapuche as a terrorist, and how the air is strategically used to interrupt Mapuche efforts in attaining autonomy over their territories and lives.

I began locating the field by tracing the formation of so-called "red zone" as a space in which fear is transformed into a political asset. This fear is grounded and legitimized through imaginaries and practices crossing colonial histories, contemporary extractive neoliberal multiculturalism, and global narratives of terrorism and securitization. I then analyzed the actions leading to the killing of Camilo Catrillanca as a materialization of this previously marked red zone of exception which, in this case, was marked by the presence of GOPE tactical police force known as *Comando Jungla*. In the examination of *Operación Huracán*, I exposed how op-atmos crystallized into an *aesthetics of deception* as a strategy to incarcerate Mapuche leaders. The opacity and neutral aura of technologies enabled a

strategic positioning of narratives on-air by media outlets, combined with a historical national imaginary around "terrorist" figures, namely, CAM and communist guerrillas from dictatorship times. Through the process of uncovering, this operation also allowed the visualization of the media infrastructures of police intelligence operations. Finally, I shed light on the incorporation of aerial surveillance, analyzing how environmental emergencies can be used to install exceptional practices and technologies into everyday life. I ended with an exploration on the possibilities for sousveillance working together to turn the state into an object of study.

3. Operational	Atmospheres a	and the "Figl	nt Against C	rime"

More facial recognition, more Internet of Things in the territory, more sensors, more real-time, more and better prediction, more drones: that's where we are going. More technological capacity in our people, that's our challenge, to move from a *carabinero* that knew little, that was in the territory, towards a technical *carabinero*.

Those are the final words of the interview I conducted with the Lieutenant Colonel of the Criminal Analysis Department (DAC) (2018). For him, introducing technical knowledge to this military police force was key to give a real meaning to the eminently preventive character of the institution, allowing the possibility of anticipating or predicting crime through the analysis of its spatial patterns. In his words,

since everything acts through spatial patterns, if we identify the spatial patterns of delinquents, which we do identify through a system, then you go to those places where the [crime] triangle closes. So, it is essential to identify these patterns, through hotspots, predictors, and a lot of other stuff that can be done.

The colonel's words embody the increasing technological mediation in urban policing in Chile, a process that not only mobilizes local efforts, but is intimately connected to transnational security paradigms and political economies, in the context of the emergence of *citizen security*, the *smart city and big data algorithmic governance* throughout the Americas. While citizen security⁷⁴ understands security as a technical problem of risk management, to prevent not only the occurrence of crimes but the feeling of insecurity (Bitar et al. 2014), smart city and algorithmic governance operationalizes the urban as a space populated by sensors and big data that can be processed to create new knowledges, and manage

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⁷⁴ Citizen Security emerged in the region in the context of transition towards democracy (Bitar et al. 2014, 9) and it understands security as a pervasive and permanent everyday matter whose production is distributed between multiple governmental and non-governmental actors, encompassing realms that go from ecological to legal and psychical safety. Citizen security "focuses on what threatens it (such as violence in society, criminality and insecurity in the face of real or imaginary risks), and on what protects it (through different state and civil society institutions related to its promotion and protection)". (Bitar et al 2014, 9-10. Translated) That definition is part of a 2014 report entitled: "A strategic look at Citizen Security: Contributions from engineering, developed by an interdisciplinary group of security experts in Chile. Lead by Sergio Bitar, an engineer and former minister in the governments of Salvador Allende and Michelle Bachelet, who was also a political detainee under Pinochet's dictatorship. Other participants in the report were lawyer Hugo Frühling, at the time director of the *Centro de Estudios en Seguridad Cindadana* at Universidad de Chile; anthropologist Patricio Tudela, part of the prominent think tank *Paz Cindadana*; lawyer Javiera Blanco, who was Undersecretary of *carabineros* (2006-2010) under the first Bachelet government, and also executive director of Paz Ciudadana (2010-2013); and engineer Raúl Manasevich, director of the Center for the Analysis and Modeling of Security (CEAMOS).

populations and places. Jointly, these perspectives emphasize the technical approach for the government of life based on the probabilities of events.

In this context, the chapter explores the entanglements of global discursive practices, economies and technologies in Chilean urban policing, and how they mobilize operational atmospheres, materialized in the development of big data algorithmic cartographies, and the distribution of aerial sensors in the fight against crime.

Based on interviews with two Lieutenant Colonels of *carabineros*, a municipal chief of citizen security, and a lawyer expert on digital rights; the analysis of reports, press, and bibliography; and the examination of the technologies employed, I analyze the process of introducing these new technologies in Chile, and the discursive practices around it. From the use of big data to the deployment of smart sensors, these technologies are changing everyday policing to a form that not only claims to prevent and control crime, but it is increasingly focused on the feeling of insecurity, becoming an affective force. Ultimately, what is at stake is how these technologies are participating in the production of knowledges and practices that outline spaces of otherness and a criminal Other, by forming specific operational atmospheres. How do these algorithmic cartographies reproduce, enable, legitimize and mobilize a socio-differential policing approach, producing racialized and class-based dynamic exceptional spaces? How do these operational atmospheres produce urban others by defining dynamic territories of suspects?

In order to explore these issues, and the construction of operational atmospheres in the urban sphere, I center the analysis in three mediation processes: the development of algorithmic policing and sensing by analyzing 1) informational systems based on CompStat's risk management introduction in Chile and 2) the development of predictive policing, and 3) the extension of aerial surveillance through particular drones.

3.1 Risk and Punishment: the introduction of CompStat in Carabineros

The introduction of risk management informational systems in Chile not only epitomizes but is intimately connected to criminal perspectives and technologies advanced in the United States since the nineties, and disseminated across Latin America. In this section, I present the integration in *carabineros* of a local version of CompStat from the New York Police Department, weaving the transnational narratives that participate in the production of local urban operational atmospheres.

Exporting CompStat to Latin America

CompStat, a short for Computer Statistics or Compare Statistics, is a police management system based on the use of spatial statistical crime information to communicate decision-making on everyday policing practices. It was introduced into the New York Police Department (NYPD) in 1994 by William Bratton, police commissioner between 1994 and 1996, in the context of New York City's mayor Rudolph Giuliani's "zero tolerance" crime policy, that is, the strong punishment of minor crimes. Although the use of statistics in crime is not a recent practice, Bratton conceived it as a daily tool to direct police operations and strategies, and changed the responsive approach of policing to a preventive one, guided by information. This expanded the role of police and moved decision-making away from a "hierarchical bureaucracy", "taking the handcuffs off cops" (US Bureau of Justice Assistance 2013, 6).

More than a management system, CompStat entails a particular form of understanding crime and an artefact for disciplining policing, as read in Bratton's words,

we were told that the causes of crime were economic, social, demographic and ethnographic and that we could have no impact on these so-called causes. Rather, we were encouraged to focus on response to crime and to measure our success by arrest numbers, clearance rates and response time (Bratton, 2006). (...) I, along with a number of police leaders at the time, did not accept this notion that the police could not modify behavior and control crime. (...) Crime may go up or

down to some degree when influenced by many of the old so-called causes (that I prefer to describe as influences), but the quickest way to impact crime is with a well-led, managed and appropriately resourced police force that embraces risk taking and not risk adversity, and a policing structure that includes accountability-focused COMPSTAT management principles, broken windows quality of-life initiatives and problem-oriented community policing. In sum, you can expect that which you inspect. (Bratton and Malinowski 2008, 261)

Such an understanding of crime moves away from the search for complex social explanations to a technical-managerial-environmental approach that seeks to identify visible crime signs and patterns that can be re-engineered. It is inspired by the highly questioned **Theorem 16 Broken Windows** theory proposed by criminologist George L. Kelling and political scientist James Q. Wilson (1982), who believed that by maintaining the order in the environment it was possible to decrease the opportunities of crime. Thus, police should pay attention and punish minor offenses that disrupt the order of a space, from loitering to graffiti.

Another theory embedded in this system is the *Place Management Routine Activity Theory* by Cohen and Felson (1979), which comprehends crime in relation to people's everyday activities in space, focusing on situations of possible crime events, that include an offender, a victim, and a place. This figure is known as the *crime triangle*. In order to prevent the occurrence of crime, the police have to prevent the triangle from closing by identifying the patterns of everyday routines, of both victims and criminals.

Combined, these schemes promote a pervasive everyday surveillance and an intensive presence of police on the ground in *calculated* critical areas. This approach to crime has been called the *criminologies* of the everyday life by David Garland (1996):a set of theories⁷⁶ outset in the seventies, in which "Crime becomes a risk to be calculated (both by the offender and by the potential victim) or an accident to be avoided (Poyner 1986), rather than a moral aberration which needs to be specially explained" (451).

⁷⁵ See Harcourt and Ludwig 2006, who demonstrated the lack of empirical evidence to support this theory.

⁷⁶ Those theories are 'rational choice theory, routine activity theory, crime as opportunity, and situational crime prevention' (David Garland 1996).

As a consequence, policing expands into the fabrication and control of everyday atmospheres. Since the main concerns are the environmental risks and the production of feelings of safety, it is necessary to take out of place and circulation that and those who are classified as "dangerous" for the maintenance of a particular order.

In the U.S., this translated into an exponential expansion of incarceration - imprisoning mainly young black men from low income neighborhoods -, the increment of practices of stop and frisk, the strong punishment for petty misdemeanors, and the multiplication of police brutality and excessive use of force (Amnesty International 1996, Harcourt 2001). Above all, it promoted the expansion of fear and the criminalization of poverty crossed by prejudices of class and race, as sociologist Loïc Wacquant (2008; 2009) has noted.

Wacquant (2009) analyzed how this neoliberal "punitive common sense" transformed into a global crime paradigm as it was exported beyond U.S. frontiers, strongly promoted by the Manhattan Institute neo-conservative think tank, including as a fellow broken windows proposal, George Kelling, Giuliani's private consulting firm, and Bratton's group, who travelled around the world implementing versions of the (in)famous CompStat as the most "effective" fight against crime by *fixing the broken windows*.

From the late nineties, the "Giuliani doctrine" of zero tolerance and its statistical "management" system expanded throughout the Americas: introduced in Brazilian megapolis; Mexico City; Buenos Aires, Argentina; the "tropicalization" of CompStat for Caracas, Venezuela in 2001; advertising how "the New York clean up works in South America" (Lifsher 2001)⁷⁷. Even a permanent office of the

77https://web.archive.org/web/20080515172959/http://www.manhattan-institute.org/html/wsj-if he can fight.htm

Manhattan Institute was installed in Santiago, Chile, through which they promoted and organized a policy exchange program for Latin America⁷⁸.

Consequences of this expansion were the increased criminalization of the urban poor, crossed by ethnicity and class, expanding a logic of "punitive containment", and the militarization of urban marginalities, as seen in the Brazilian metropolitan *favelas* (Wacquant 2008).

In the case of Mexico city, Campesi (2010) described how the implementation of CompStat's police topography promoted the repression of urban poverty, and informal economies were perceived "as a threat to public security and also as problems to be dealt with through repressive instruments and laws amplifying police powers (...) [with the explicit aim] to clean out public spaces by removing these activities from them, and so by removing from sight the people who engage in these activities" (459). Even more, the "drive to produce statistics led to an increase in police abuse" (460), similar to what happened in the case of New York and Baltimore, where the other form of expression was "juking the stats". According to communication scholar Rossana Reguillo (2004), another criminalized group in Mexico were young people from popular sectors, with mass media serving as a sounding board for this punitive imaginary, characterized by the excess of fear and lack of scapegoats, continuously stigmatizing youth and justifying the climate of police violence and human rights violations (155).

Atmospheres of fear triggered the expansion of gated communities or fortified enclaves for the urban wealthy (Caldeira 1996), and marginalization and imprisonment for the urban poor, shaping urban geographies of fear and positioning the city as a space of risks to be calculated and contained through intensive micro policing. I want to keep these two elements in mind, operating at the center of this cross-border narrative, when analyzing next the case of Chile: fear of insecurity and the management of "risks" present in the environment defined from the perspective of the *broken windows*.

⁷⁸ https://www.nytimes.com/2002/11/11/nyregion/the-americas-court-a-group-that-changed-new-york.html

Compstat in Carabineros: From S.T.A.D. to S.T.O.P.

In spite of having one of the lowest and relatively stable crime rates compared to the rest of the region, Chile shares the Latin-American urban geography of fear, embedded in a highly segregated and socially fragmented city like Santiago (Dammert 2010). As in the rest of the continent, the "solution" to this problem appeared in a triad: Kelling's broken windows, Giuliani's zero tolerance, and Bratton's CompStat. This was highly embraced by mayors of the wealthiest municipalities in Santiago city, such as Vitacura, Lo Barnechea and Las Condes, who in 2002 travelled to New York as part of the policy exchange promoted by the Manhattan Institute. "Giuliani had a great success in restoring security to the city of New York", affirmed Raúl Torrealba, mayor of Vitacura, in a New York Times article (2002), "He displayed that you have to focus on small things if you want to get the big things under control". According to the same article, one of the "leading adherents" of the region to the Manhattan Institute's politics was mayor of Las Condes, Joaquín Lavín, a Chicago boy supporter of Pinochet's dictatorship, who introduced the first Municipal Citizen Security subdivision in 1995. This civilian force would support the work of *carabineros* and PDI, an initiative that was later replicated throughout the country.

In spite of the early enthusiasm and participation of Chilean municipalities in this "transnational triad" of policing, only in 2011⁷⁹ the "dream came true" ⁸⁰ and a local version of CompStat was implemented in *carabineros*: S.T.A.D. - *Sistema Táctico de Análisis Delictual* (Tactical System of Criminal Analysis). The project was financed by the Inter-American Development Bank (IDB) and promoted by the Undersecretary of Crime Prevention under the right-wing government of Sebastián Piñera. IDB hired Altegrity Security Consulting directed by Bratton, to install an informatic platform destined

⁷⁹ There was another system developed before, AGEOP, that did not work because it was not installed properly (Interview LC, 2018).

⁸⁰ https://www.interior.gob.cl/sitio-2010-2014/n6383 01-12-2011.html

to improve police management (Piñol et al. 2015), hoping to, among other goals, "direct *carabineros* to take all the steps possible to diminish crime" (SPD, 2012, in Piñol et al. 2015, 2).

By analyzing the already existing police databases⁸¹, Altegrity developed an informatic model based on weekly reports, the S.T.A.D. file report or matrix of control, which showed the frequency of crimes of greater connotation (DMCS)⁸² in time in a specific zone, displaying the variance in comparison to the previous year. By 2012, the presence program went from three prefectures in Santiago in 2011, to a nation-wide reality.

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	2012	2011	% Cambio		2011	% Cambio			% Cambio
Robo con molescus	2			21		-13%	109	9/	12 %
Robo con intimidacion	2	11	-42%			-60 %	123	141	-13 %
Robo por sorpresa	11	5	22 %	30	42	-29 %	101	245	-34 %
Lesiones	16	31		06	122	-30 %	549	620	-05
Homicidios		(0 %	0		0 %	3	1	200 %
Violaciones			0 %	0		0 %	2	3	33 %
DELITOS VIOLENTOS	31	55	-44 %	153	228	33 %	967	1107	-13 %
Robo de vehículo	3		-60%	9	20	-65 %	88	66	35 %
Robo objeto de o desde Vehiculo	7	24	-71%	46	75	-39 %	275	312	-12 %
Robo en legar sanitado	5	4	25 %	.33	19	74%	700	163	23 %
Robo on lugar no habitado	7		17 %	20	33	-12%	179	170	0 %
Otros robos con luerza	4	2	100 %	5		-17 %	22	48	-54 %
Hurtos	41	76	37%	201	262	23 %	1020	1243	18 %
			-37 %			-22 %	1784		-11 %
TOTAL	105	173	.39 %	476	643	26.%	2751	3117	.12.5

Figure 36 S.T.A.D. report file, August 2011 (*Carabineros* 2013 report, accessed March 30th, 2019, https://docplayer.es/79217910-Agosto-sistema-tactico-de-analisis-delictual-s-t-a-d.html)

A profound process of socialization and legitimization of the system was necessary to make S.T.A.D. work in all of *carabineros*' police stations, which was at first resisted by *carabineros* due to its top down approach, according to researches Piñol et al (2015). The system also experienced

⁸¹ Carabineros already had their information digitized and connected thanks to a program initiated in the mid-90s known as AUPOL (Automatización Policial - Police Automation).

⁸² According to Piñol et al. (2015), "that category was delimited by the Ministry of Internal Affairs in 1997, seeking to group a series of crimes together that, due to their nature, would have a greater impact on the safety of people, either by affecting their assets and their physical or psychological integrity, and/or because they present a high occurrence. These crimes are: Robbery, Surprise Theft, Violent Robbery, (including Motorized Vehicle Theft or Car Theft, Theft of Accessories or Objects from Vehicle, Breaking and Entering, Theft in Uninhabited Place and other Violent Robberies), Aggravated Robbery, Injury, Rape and Homicide." (2).

modifications from one government to another: S.T.A.D. transformed into P.A.C.I.C. during Michelle Bachelet's government, and then became S.T.O.P.⁸³ in current Piñera government. An important section of carabineros in charge of making the system work was the Department of Criminal Analysis (DAC), born along with S.T.A.D. It is worth noticing that the particularity of this system's integration is that it is not directed to high level special police units, but to everyday policing in the blocks. For the system to work, it was necessary to distribute expertise throughout the whole institution, high and low ranks alike, by installing the concept of criminal analysis, according to the geographer and DAC lieutenant colonel (LC) I interviewed.

In order to accomplish that goal, LC said they employed two strategies. The first was to socialize the theories and methods through the creation of a certification course to train police officers, the publishing of a journal, and the development of seminars with the "people that invented the theory we study at the moment, the broken windows theory, which is very popular".

The second one, implemented four years ago, was the inclusion of three professionals in each police station: a geographer, a psychologist, and a social worker. They hired 300 civilians, becoming the institution with more geographers in Chile. They form part of the *oficina de operaciones* (operations bureau) present in each police station since 2010⁸⁴ to analyze information and plan police operations framed in the context of *plan cuadrante*, that is, the organization of *carabineros*' work around a small-scale space. With these changes, they were able to position the use of geospatial information at the center of everyday policing during the past years, according to LC. Through a geospatial platform they developed, S.A.I.T.⁸⁵, they put information to work and developed a number of calculations, such as hot spots analysis, that visualize places with greater crime concentration. Urban operational

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⁸³ Sistema Táctico de Operación Policial

⁸⁴ http://www.carabineros.cl/transparencia/og/og1960.pdf

⁸⁵ Sistema de Análisis de Información Territorial

atmospheres were emerging by the collision of statistics, geospatial analysis, and affects mediating policing.

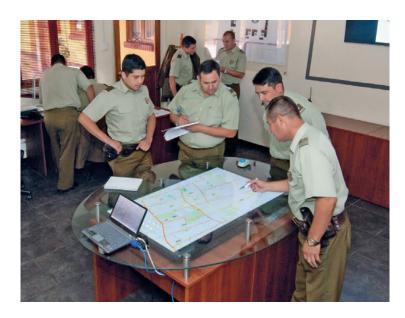


Figure 37 Operations Bureau in Peñalolen, Santiago. 2014. Available at http://www.revistacarabineros.cl/assets/709_mayo_2014.pdf



Figure 38 Police maps in Peñalolen police station, Santiago. Map positioning suspects' identities (left) and conducting a hotspot analysis (right) (*Carabineros* 2014). Available at http://www.revistacarabineros.cl/assets/709 mayo 2014.pdf

I will explore the implications of geospatial platforms in policing in the next section but first, I want to analyze how, through the integration of the local version of CompStat, the vision of *carabineros* on the ground was disciplined to look at the environment as a space of "risks that threaten" the feelings of security of citizens. Moved by informational systems in endless need of data, *carabineros*

were programmed to see the world as (in)security material variables. This embodied vision of urban operational atmospheres can be observed by navigating the public online STOP platform.

Unsafe Trees: Carabineros' gaze as a semiotics of risk and punishment

When the S.T.O.P. system was launched in 2018, a public web platform was opened. It combines a map and statistical information of crimes per zone (*cuadrantes*). Something particular about the way information appears in it is that, in contrast with NYPD CompStat 2.0 for instance, the dots highlighted on the map are georeferenced risks, not crimes. The platform guides the user to the environmental risks before showing the statistical information related to that zone; materializing the theories mobilized under these systems, more concerned with environmental "risks" than crime itself.

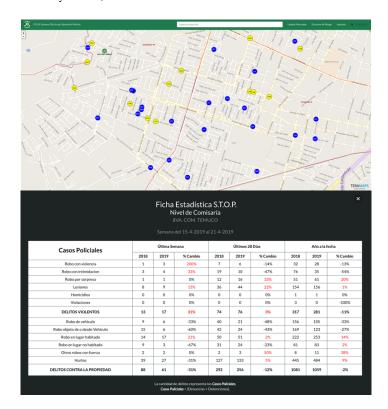


Figure 39 S.T.O.P. Map of risks (top) and statistics (bottom) (Screenshot taken from S.T.O.P. public platform, accessed April 30th, 2019, http://stop.carabinerosdechile.cl/)

Interestingly, each of the georeferenced "risks" correspond to a picture taken by police officers during their daily patrols. For example, a tree (Figure 40). What is wrong with that tree that it is classified as a situational risk by the police officer on the ground? Its excess of foliage that affects artificial illumination during nighttime, resulting into "a possible criminal focus, use of alcohol and/or drugs, generating a feeling of unsafety", as noted by the report of a *carabinero* in Temuco. In the urban experience, light is the artefact that extends operational atmospheres during the night, prolonging the presence of *carabineros* bodies even if they are not there, as power is understood as a constant play of lights (Browne 2015).

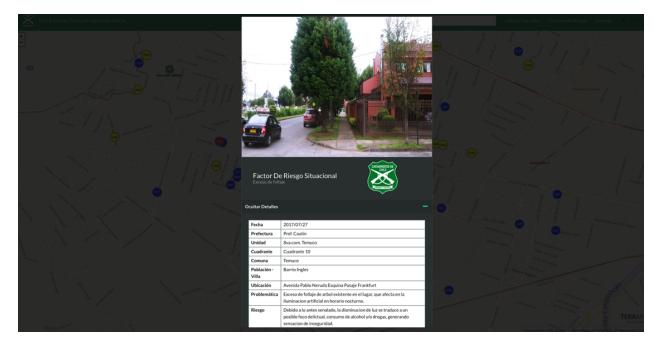


Figure 40 A tree as a situational risk since it affects lightning, June 2017 (Screenshot taken from S.T.O.P. public platform, accessed April 30th, 2019, http://stop.carabinerosdechile.cl/)

Another situational risk is the presence of graffiti (Figure 41). What could be defined as street art can be a signal of increasing crime probability for the police when it is located in the city's public space (and not in an art gallery or shopping mall, for example), even this colorful graffiti. Most likely, it is read as a manifestation of young people and their street culture, which from the "broken windows"

perspective, threatens the proper order of an imagined neoliberal aseptic crystal city. All the nuances and cultural specificities of street vibrant youth cultures are clashed by *carabineros'* programmed gaze and its risks' semiotics, that produces insecurity while looking at the world, materializing the state's anxieties more than identifying a local feeling of unsafety.

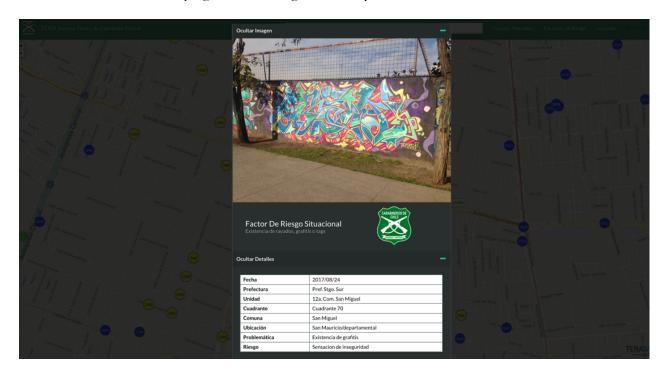


Figure 41 A graffiti as a situational risk that provokes feelings of insecurity, August 2017 (Screenshot taken from S.T.O.P. public platform, accessed April 30th, 2019, http://stop.carabinerosdechile.cl/)

In Figure 42, the risk is not situational but social: the presence of homeless people who use drugs and drink alcohol, "generating insecurity to the neighbors in the area". The tag in the background is not even mentioned as a risk as there is a greater threat in the ambience. In an attempt of resistance, the Chilean flag (possibly) installed by the homeless in their occupied space, can be interpreted as an attempt to signal their rights to inhabit public streets, as citizens of this country. The flag's presence are a reminder of the "tomas de terreno", a collective act of taking abandoned lands in the outskirts of the city by people who don't have a place to live. This was really common during

socialist times, and there still are iconic settlements that began as *tomas* and eventually became authorized neighborhoods.

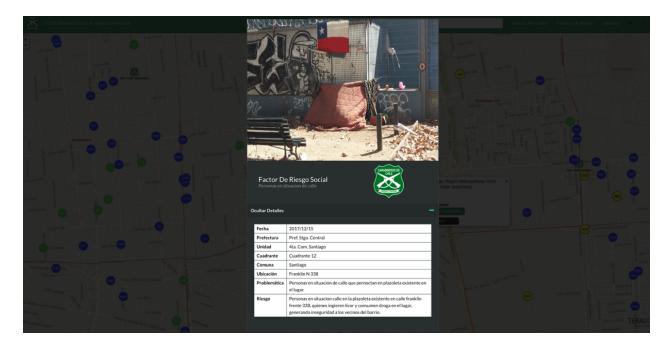


Figure 42 Homeless classified as a situational risk that generates feelings of insecurity in the neighborhood since they drink alcohol and use drugs in the place, December 2017 (Screenshot taken from S.T.O.P. public platform, accessed April 30th, 2019, http://stop.carabinerosdechile.cl/)

By identifying "risks" in the environment and proposing possible solutions grounded in the modification of urban settings, policing becomes the creation of ambiances, atmospheres of normalized "safety". In these photos, one can see the world through the gaze of police officers: how they conceive risk, embodying the *broken windows* approach to understand order as it relates to crime risks. The *carabineros* on the ground walking, looking, taking pictures, uploading them to the platform, classifying them as a particular risk and describing its reasons, materializes the disciplinary power of CompStat/S.T.O.P. in their daily policing work. In their everyday paths, they produce risk geographies, materializing what the state wants to eliminate from the public: to move out of space, out of view, of circulation from public life. In their movements, they are activating operational atmospheres and in the process of doing so, they also turn the world of risks machine-readable to

enable the constant production of algorithmically mediated cartographies, which in turn will redefine the risks of the terrains they walk and guide their near-future paths. I will explain in the next section how these algorithmic cartographies work. Before, I want to reflect a little bit more on how S.T.O.P. is mediated policing.

S.T.O.P. is a disciplinary mechanism for the police body, who become routinely normalized through the training of police's risk gaze and classification by means of mediation processes. Their views get programmed to identify specific risks in the environment as they consistently walk the city, mediated by S.T.O.P. cartographies. In virtue of that process, policing becomes the creation of sterilized ambiances, and the criminalization of everything and everyone who doesn't fit in that model.

In order to make S.T.O.P. work, every police carry a SIMCCAR device (Figure 43) that guides and monitors their movements, which are observed from the police station operations room. Among the capacities of SIMCCAR are: identity control through information and fingerprints⁸⁶, as it is connected to the *Registro Civil* (civil registry) database; check car plates' information; conduct statistical analysis; and export information, while their paths are traced in real time and stored. Even more, it has a "morphological filter" which allows to identify suspects based on height, gender, skin color, clothing, body composition, and more, in a particular zone. With that, they can turn both the environment and the *suspects* in it into data.

⁸⁶ https://www.pegasus.cl/simccar/index.html Accessed 30 April, 2019

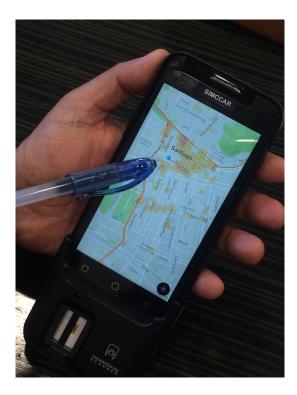


Figure 43 Carabineros' SIMCCAR navigational device, August 2018 (Josefina Buschmann)

There is an intrinsic paradox in this management system and its encoded principles. *Broken windows* don't seem to "fix" the windows broken, but only takes them out of sight. Instead of "disciplining criminal populations", this perspective punishes poverty, as anthropologist Clara Han (2017) has shown in her long-term fieldwork in a Chilean urban margin. Influenced by Bernard Harcourt (2006), critic to broken windows in New York context, she reinterprets Foucault's work, in which

"law and discipline clash and feed off each other in the modern imprisonment system, which "justifies the power to punish. It makes punishment seem natural, necessary, and preordained". Yet, in contrast with Foucault's focus on the reform of the disorderly, the order-maintenance approach "does not aim to reform the disorderly as much as it does to punish them, exclude them, in the sense of getting them off the street (...) Thus, order-maintenance policing works to create subjects through a set of norms defined by techniques of punishment, while also justifying this punishment in the name of harm" (Han 2017, 164-5).

It is true that people living in urban margins are *in harm's way*, as anthropologists Auyero and Barbero (2012) have pointed out in their work in a Buenos Aires' slum, as the "poor do not breathe the same air, drink the same water, or play on the same playgrounds as others" (20). In contrast to

their explanation that policy-makers are unaware of this situation, I would say they are hyper aware of the importance of the creation of safe environments, but the problem is who are they securing and what type of spaces they are proposing. Furthermore, there is a constant stigmatization of other forms of living that escape the white aseptic imagined city. It is necessary then, in Han's words, to "reorient dispositions towards low-income neighborhoods as "uninhabitable" and from which people desperately seek to escape, but to respond to them as a milieu in which people attach importance to place, to flesh-and-blood others, and to things." (163-4).

As seen through the images of *carabineros*, urban is more a matter of policing and risks than anything else and, as a result, despite of being a "systemic" perspective behind policing that connects *carabineros* with other state institutions, the first approach to the field is from the securitization and risks perspective, where problems are solved with more security, more patrolling, more technologies, and the exclusion of those that are out of order by punishing difference, the dangerous others.

This can be exemplified by the increasing police attack on informal economies, as what happened in central Santiago and even worse, in central Temuco city when special forces violently attacked a group of Mapuche women who were selling their crops in the streets, as they traditionally do⁸⁷. Increasing police brutality was noticed since the beginning of the century, especially during public demonstrations (Amnesty International 2016). These effects are similar to those in New York and Mexico City. The (not so) invisible hand (of the neoliberal market) calls for the iron fist, as Wacquant would say. In other words, this anatomy of power is no longer about discipline and punishment, as Foucault would say, but about risks and punishment.

⁸⁷ El Desconcierto. 2018. "Alimentos fueron pisoteados en la calle: Violento desalojo de Carabineros a mujeres mapuche que vendían hortalizas en Temuco." *El Desconcierto*, March 20, 2018. https://www.eldesconcierto.cl/2018/03/20/alimentos-fueron-pisoteados-en-la-calle-violento-desalojo-de-carabineros-a-mujeres-mapuche-que-vendian-hortalizas-en-temuco/.

3.2 Encoding Risks in the Surface: the introduction of crime prediction in Carabineros

More real than it seems

It looks like science fiction but it's more real than it seems

Matías del Río, 24 Horas Central, 2017.



Figure 44 "Chilean software can predict crime" Screenshot (24 Horas Central News) YouTube, accessed November 17th, 2018, https://www.youtube.com/watch?v=k-0Q4yWW-k

May 2017. Right after the news on one of the biggest embezzlement of funds committed by *Carabineros*, known as 'Paco Gate' (*Cop Gate*) – the disappearance of \$28,300 million Chilean pesos (~41.9 million USD)⁸⁸ with 135 *carabineros* being charged so far- a scene from Steven Spielberg's 2002 *Minority Report* fills the screen of 24 Horas Central, one of the prime TV news programs in Chile. It is

⁸⁸ El Desconcierto. 2018. "Nuevo cómputo del Pacogate: Fraude en Carabineros asciende a \$28.300 millones." *El Desconcierto*, December 21, 2018. https://www.eldesconcierto.cl/2018/12/21/nuevo-computo-del-pacogate-fraude-encarabineros-asciende-a-28-300-millones/.

the introduction to a new predictive policing system developed by the Center for the Analysis and Modeling of Security (CEAMOS) of Universidad de Chile, and the Department of Criminal Analysis of *Carabineros* (DAC). The film reference used by TV is not far from the imaginary of the mathematicians, engineers, computer scientists, and colonels that developed this tool, who began the conference paper that explains this project by mentioning the 1956 Phillip K. Dick book, *The Minority Report*, in which the movie was based:

"Science fiction had anticipated the prediction of future occurrence of crimes. In fact, that prediction is actually possible. It can be done with some imprecision and by computer algorithms, using available data from various sources" (Baloian et al. 2017, 2).

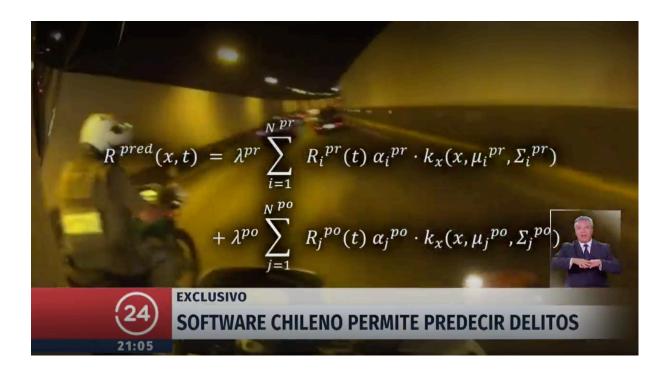


Figure 45 Chilean predictive equation over a video showing a police operation from the perspective of the body worn camera of a *carabinero* riding a bike (Screenshot 24 Horas Central News, YouTube, accessed November 17, 2018, https://www.youtube.com/watch?v=k-0Q4yWW-k)

In the same note, the reporter continues, "this program is not divination nor magic. These are mathematical formulas that predict crimes through algorithms". The characters of the equation are shown on the screen on top of a police officer riding a bike, patrolling what looks like a low-income

neighborhood in Santiago (Figure 37). "But Chile is not the only one using these technologies", the news story continues, "as the development of this software is inspired by PredPol at the Los Angeles Police Department, which revolutionized the work of the police. Now we have the Chilean version that is also the first in Latin America".

The way this new Chilean crime prediction software is presented to the public on the news can give us a glimpse on the imaginaries and global securities practices colliding in it, which is important because, as Tarleton Gillespie (2014) affirms,

while the algorithm itself may seem to possess an aura of technological neutrality, or to embody populist, meritocratic ideals, how it comes to appear that way depends not just on its design but also on the mundane realities of news cycles, press releases, tech blogs, fan discussion, user rebellion, and the machinations of the algorithm provider's competitors. (182).

In this case, it is interesting to analyze the integration of the equation as the main character of this narrative, perhaps to point out that behind every *carabinero* on the ground, there is an equation in operation guiding their rides towards the future: the future as the predominant temporality of this predictive policing software; and Chile as the maker or opener of the "futures" of policing in the region, guided by U.S. influences.

There is a combination of feelings of uncertainty and excitement around these technologies at the end of the news story, when the reporter asks Raúl Manasevich, director of CEAMOS, about the "infinite possibilities" of this tool, to what he responds, "we know where we started, we don't know very well where we will end up". I will now turn to critically examine that starting point in the process of construction of this predictive system, analyzing its transnational connections, the context of implementation, and the data, algorithms and visualization technologies mediating policing in Chile and crystallizing particular forms of operational atmospheres.

Like PredPol made in Chile

Predictive policing can be described as "any system that analyzes available data to predict either where a crime may occur in a given time window (place-based) or who will be involved in a crime as either victim or perpetrator (person-based)" (Richardson, Schultz, and Crawford Forthcoming, 6). In Chile, the emergence of predictive policing is related to local and cross-border networks of experts, economies and computational criminal technologies politics. On one hand, the "technical turn" in carabinerss made their large geospatial criminal database "machine ready", and positioned them at the center of everyday operations, while disciplining and professionalizing the police body in their use (situation analyzed before in relation to CompStat). On the other, the computational capabilities advanced by Chilean mathematicians and engineers from CEAMOS⁸⁹ at Universidad de Chile inserted an international network of quantitate approaches to security, sharing technical expertise and knowledge across countries.

CEAMOS was formed in 2007 to

develop quantitative and analytic models to improve the prevision, forecast and understanding of crime behavior. Working through multidisciplinary activities, combining Criminology, Computer Modeling, Geographic Information Systems, Mathematical Modeling, Mathematics, Economics, Game Theory and Statistics, among others.⁹⁰ (CEAMOS website)

In 2009, they were awarded with \$450 million Chilean pesos⁹¹ (~US \$771,800) by CONICYT⁹² to develop the "Quantitative methods in security" initiative, directed by Raúl Manasevich, from 2010-2013⁹³. One of the goals of the project was to foster global connections by developing seminars and workshops. In 2012, Raúl Manasevich was one of the co-organizers of the "Hot Topics Workshop on Computational Criminology" ⁹⁴carried out in the Institute for Canadian Urban Research Studies

⁸⁹ Center for Analysis and Modeling of Security

⁹⁰ http://ceamos.cl/wp/?page_id=131

⁹¹ https://www.conicyt.cl/pia/2009/05/05/iii-anillos-cyt/#tab-04

⁹² National Commission for Science and Technology Studies in Chile

⁹³ http://repositorio.conicyt.cl/bitstream/handle/10533/207301/ACT-87.pdf?sequence=1&isAllowed=y

⁹⁴ http://www.crime-prevention-intl.org/fileadmin/user_upload/Publications/2016/Actes Mexico ES.pdf

(ICURS), directed by Patricia and Paul Brantingham. This international network of researchers comprised influential experts working on computational criminology (2012)⁹⁵ from Canada, the U.K., and the U.S., including mathematicians Andrea Bertozzi, George Mohler and anthropologist Jeff Brantingham, responsible for the creation of PrepdPol, one of the first software packages developed to forecast the presence of criminal events, implemented from 2006-2009 in Los Angeles Police Department (LAPD).⁹⁶

Similar to CompStat, Predpol is inspired by theories of everyday and environmental criminology. This software "uses historical crime data to forecast the future risk of crime at certain places and times" (PredPol blog 2019). Its prediction system employs algorithms modeled after mathematics applied to the forecast of earthquake aftershocks, creating maps with grids representing probable crime risks, to direct police efforts to specific spaces at certain moments.

Most of the discussions in the "Hot Topics" workshop focused on the different techniques employed in the field of computational criminology and their problematics. For example, the calculation of hotspots: a common method that, broadly speaking, is characterized by the recognition of zones in space with a higher concentration of crime events to identify geospatial crime patterns. Although hotspots look like a straightforward method, there is a complexity in the definition of the hotspot itself, as PredPol's creators note,

It is not clear how to define what a hotspot is, or if a single definition is even possible. For example, if someone calls the police ten times a week, does that mean the caller's location is a crime hotspot, or the caller just has a low tolerance for non-criminal events in his environment? In this case perhaps one can differentiate between calls and investigations? On the other hand, calls can come from both victims and offenders, so information might be lost as well. (Bertozzi et al 2012) 97

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⁹⁵ Report for the PIMS Hot Topics Workshop on Computational Criminology, September 19-21, 2012 http://www.pims.math.ca/files/Computational Criminology Report.pdf

⁹⁶ http://blog.predpol.com/happy-birthday-to-predpol-7yrs.-strong

⁹⁷ Report for the PIMS Hot Topics Workshop on Computational Criminology, September 19-21, 2012 http://www.pims.math.ca/files/Computational Criminology Report.pdf

Then, it is up to the engineers of the system to *decide* what is included in the classification and, as such, *produce* red zone areas.

Hotspot was one of the geospatial analysis *carabineros* were employing in 2013, defining their patrolling zones and preventive identity controls visualized in their S.A.I.T. geospatial platform (Figure 38), used by approximately 1,200 *carabineros* per day. In this case, the hotspot was configured using police cases' geospatial data (complaints and detentions). They also used that information to compare if the preventive controls on these zones were or not displacing crime.

If we look at *carabineros*' hotspot map of Santiago in 2013 (Figure 39), most of the yellowish-red zones are located in the South and North-West areas, which are the medium to low income zones. The upper classes living in the Municipalities of Las Condes, Vitacura, and Lo Barnechea (North-East areas) had almost no presence of hotspots in their areas. One can assume, by looking at the map mediating policing practices, that a higher presence of policing and "preventive" identity controls is concentrated in the low-income neighborhoods. As such, the production of operational atmospheres appears to be differential, and has an economic class-based structure. A more profound analysis is necessary to affirm that, at plain sight, it is visualized that way and *carabineros* are guided by these visualizations, re-producing them on the ground with flesh and blood people affected by these encounters. These abstractions mobilize real life encounters, the cartographic operations generate local atmospheres, setting an affective capacity in motion.



Figure 46 A hotspot analysis in the S.A.I.T. platform, comparing criminal cases (upper left) with preventive controls (bottom right)(*Carabineros*,2013).



Figure 47 S.A.I.T. platform with Hotspot Map of Santiago (upper right) (Carabineros, 2013).

More recently, *carabineros* are using a more complex geospatial analysis, producing "superhotspots" with multi-criteria analysis, including other type of data, beyond the purely criminal one. According to a DAC Lieutenant Colonel, they were inspired by *PredPol* and other systems such as *Promap* from UCL, and *Risk Terrain Modeling*, to develop a project with CEAMOS to create a *crime prediction software* for large cities, with the support of the Undersecretariat for Crime Prevention⁹⁸. *Carabineros* and CEAMOS were motivated to develop this system by the "high worry of Chilean population regarding urban crime: recent surveys show delinquency as the main problem as *perceived by people.*" (Baloian et al 2017, 2). That is, they were driven by perceptions of crime: feelings of unsafety quantified through surveys, not by crime rates *per se.* On the same note, they did not develop a method to map crimes, but one to "predict the relative level of risk" (Idem) in a specific space-time period.

The main goal was to "make significant predictions", that is, to *discover* undetected crime patterns in an area small enough "so that police can patrol it with more emphasis than unselected areas (...) depicting the cells in which crimes are more likely to occur, while keeping the number of depicted cells as low as possible" (Idem). Each cell corresponds to 150 x 150 meters, which matches the unit of *carabineros*' patrolling area. These cells are monitored in three -8-hour shifts a day, so the crime predictor is divided into three time periods, that is, it changes risk predictions every 8 hours. Just like with the hot spots, these algorithmically produced cells form part and put in motion zones of police procedures, crystallizing operational atmospheres in a resolution of 150 square meters (Figure 48).

⁹⁸ The program investment was of \$150 million Chilean pesos (~220,150 US dollars)

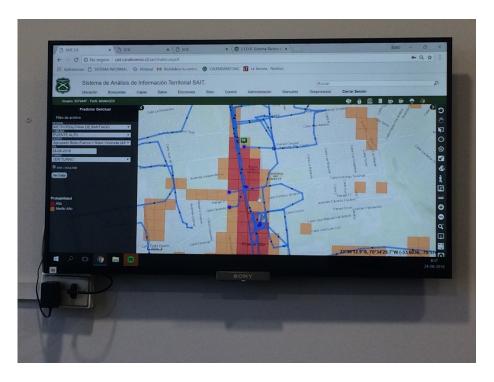


Figure 48 Risk surface grid in the S.A.I.T. 2.0 platform, showing one of the Municipalities in the south of Santiago. The blue lines represent police patrolling trails on the ground, mapped through the use of a SIMCCAR GPS in real time. Blue dots are their current position. (Josefina Buschmann)

Although these new algorithmic cartographies seem similar to the previous visualization of hotspots - as both take on the shape of a map with colored zones -, they are substantially different. Crime prediction cartography is not about visualizing events that happened in the past, but calculating what may happen in the future, projecting risks into the present. By doing so, they engage in "a particular mode of governing" built on risk techniques. As scholars Amoore and de Goede (2008) have observed, "Risk is a construction, a "way in which we govern and are governed" (9). Risk is performative, "it produces the effects that it names (...) It is not strictly the case that observable new risks have come to being, but that society has come to understand itself and its problems in terms of risk management" (Idem).

How, in the Chilean context, are risks being constructed and, through that process, what are the effects they are producing by integrating these systems in everyday police work? In the next pages I

analyze how these systems are working, what they are producing, and what capacities are attached to them. Although I am not able to answer these questions fully, I want to open up these systems to public discussion, as they have been silently begun their operations, but (as far as I'm concerned) little attention has been paid to them in Chile. What are they visualizing and, as such, producing? How are they mediating policing? What practices are being enacted?

According to their makers, what confers this local predictive cartography the ability to calculate criminal risks is a combination of two perspectives: expert and machine. The *expert system* "tries to encode the knowledge experts have for predicting crime occurrence in some way", and *machine learning* "lets the computer discover the patterns based on available historical data" (Baloian et al 2017, 3). By defining a set of rules and a set of data, the experts outline a frame for the machine to execute and recognize criminal patterns that escape the human eye, patterns that will later guide the police gaze on the field. In this case, the set of rules are three algorithms⁹⁹ which define the importance of certain variables, and assumptions related to the probability of crime occurrence in a particular spatiotemporal frame: the past presence of criminal events (complaints and detentions) in a place and how that event increases crime risk in its surroundings¹⁰⁰, and the presence of amenities where people and money circulate (mainly bus stops, ATMs, banks, and restaurants).

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⁹⁹ The algorithms are:

¹⁾ *Prospective method*, based on repeat and near-repeat victimization, with the premise "that properties close to the site of a recent burglary have themselves a higher risk of being targeted during some time period" (Ibid, 4). Data is extracted from *carabineros*' criminal database for each Municipality in Santiago, and other large cities in Chile.

²⁾ Dempster-Shafer theory method, a method used to test the validity of a particular hypothesis when using evidence gathered for the case of "variables affected by uncertainty" (Idem). In this case, they are testing two hypotheses:

a. "The repetitive behaviors of criminals and victims; these establish that a crime that occurred in a place is likely to occur in the same place at a certain time in the future. (...) These hypotheses are evaluated using historical police data." (Idem);

b. "The context factors that ease the occurrence of crime. These hypotheses are estimated using the city amenities' data from crowdsourced datasets like Open Street Maps. An analysis of co-occurrence of amenities and crimes shows that the most important amenities are banks, bus stops, restaurants and ATMs." (Idem)

³⁾ Multikernel method, "characterized by using information from the spatio-temporal occurrence of criminal events, to generate a dynamic risk intensity function, which indicates the location where the probability of occurrence of future criminal events is concentrated" (Ibid, 4-5)

For an extensive description of the algorithms, see Baloian et al's publication (2017).

¹⁰⁰ Known as near repeat model, the same one used by PredPol. See Brayne 2017, 989.

But more than algorithms in themselves, what makes these algorithmic operations possible is the assembly of large amounts of classified data. According to the DAC colonel, *carabineros* is the institution that has the largest criminal database in Chile, since 95% of crime complaints start in a police station. All that data was made machine-ready thanks to the previous labor of classification and digitization processes developed since the nineties (which I analyzed in previous section 3.1). Based on that, the team trained the algorithms with a database of 5-year police complaints and detentions from the townships of Santiago and other unspecified large cities in Chile, resulting in crimes with different weights¹⁰¹. They also include open source data available at Open Street Maps, to add information on crime-risk related amenities.

As a result of this expert-algorithmic-data-cartographic system, a dynamic "risk surface" is produced, transforming the terrain into mountains of probable threats. The higher the height, the higher the risk. But only some elevations appear in the map, as "Chilean police set the limit for the depicted cells at 20% of the whole urban area of a township" (Ibid, 3). Depending on the township, the effectiveness of the model varies from 77% in the best case scenario of a Municipality with higher crime rates – meaning that 77% percent of the crimes committed occurred in predicted zones –, 45.29% as the average value, to 0% in the areas where the average number of criminal events is less than 3 per day, so there is no sufficient data to "extract" patterns. The surface is updated in every shift (8 hours), and "Each patrol car team receives a diagram showing the cells that should be monitored during the shift." (Idem). According to Marcos Orchard (2018), sub-director of the project, the spatio-temporal risk surfaces generated "are automatic and require the least human intervention" 104.

¹⁰¹ A murder has a higher weight than a larceny, for example.

¹⁰² There is no explanation for this decision in the publication by Baloian et al. 2017. I think it is related to the need of making significant predictions, which basically are "operational predictions": predictions that can be put to work by police on the ground by defining areas small enough to be patrolled more frequently than others, creating a selective differentiation from other sites.

 $^{^{103}}$ The model was evaluated using a simulation to evaluate the model (See Baloian et al 2017)

¹⁰⁴ http://ingenieria.uchile.cl/noticias/142066/primer-software-capaz-de-predecir-donde-ocurriran-delitos-en-chile

This complex procedures of calculating risk surfaces materialize in an "automatically" fashioned, colored grid map, which enables its interpretation, discussion, circulation and the subsequent decision-making process that leads to the mobilization of police operations, affecting everyday lives on the ground. Although the process of creating the map is now automated, the system needs to be continuously fed with more data in order to "grasp" the changing social landscape in which crime unfolds. There is a constant interplay between humans and machines in these systems. A central one is the production of data.

There is no such thing as neutral, objective "raw data" (Gitelman 2013). The process of creating databases by collecting, cleaning, and classifying data is socially and politically defined, expressing the values and biases present on particular organizations and societies at the moment. As data practices form part of risk cartographies, histories are inscribed in their codes. Thus, the problems with data are not limited to the technical difficulties of creating a consistent data set with no missing or wrong numbers, they are engrained in the cultural context of production of that data, which is particularly complex in the police realm. In the context of predictive policing in the United States, researchers Richardson, Shultz and Crawford (forthcoming) refer to these problematics as "dirty data", shedding light on how

data can be subject to multiple forms of manipulation at once, which makes it extremely difficult, if not impossible, for systems trained on this data to detect and separate "good" from "bad" data, especially when the data production process in itself is suspicious. This challenge is notable, considering that some prominent predictive policing vendors assume that the problems of "dirty data" in policing can be isolated and repaired through classic mathematical, technological, or statistical techniques. (4-5).

In the same line, on her long-term research about the use of PredPol at the Los Angeles Police Department, sociologist Sarah Brayne (2017) notices that although the "use of big data has the potential to ameliorate discriminatory practices" (1004), her findings suggest

implementation is of paramount importance. As organizational theory and literature from science and technology studies suggest, when new technology is overlaid onto an old organizational structure, long- standing problems shape themselves into the contours of the new technology, and new, unintended consequences are generated. The process of transforming individual actions into "objective" data raises fundamentally sociological questions that this research only begins to address. In many ways, it transposes classic concerns from the sociology of quantification about simplification, decontextualization, and the privileging of measurable complex social phenomena onto the big data landscape. (Brayne 2017, 1004)

Even more complex is the situation geographer Brian Jordan Jefferson (2018) encounters in his study on the uses of predictive crime mapping in the Chicago Police Department, where he finds that

predictive crime mapping further entrenches and legitimizes racialized policing as it (1) rearticulates police data sets as scientifically valid and (2) correlates those data with other geocoded information to create new rationalizations for controlling racialized districts through differential policing practices. (1)

The problem with the creation of "objective" datasets in the context of policing practices, is that extremely delicate and differential policing practices can be easily legitimized. There is an "invisible violence inside the software models" (Amoore and de Goede 2008, 13), quietly mediating and mobilizing security forces towards targeted red zones. I have presented U.S. predictive policing literature, as the introduction of these systems in Chile is intimately connected to U.S. networks and paradigms. I have not been able to dive deeper into the data production practices and daily operations of *carabineros* algorithmically mediated, but I think it is extremely important to open up that process to public scrutiny, and not uncritically reproduced international policing practices and paradigms in Chile. Especially due to the local engineering capacities for producing crime predictors and eventually exporting and implementing them in Latin America.

I have analyzed the informational and algorithmic systems mediating policing in Chile, through which the notion of risk and the feelings of (un)safety have become active forces mobilizing op-atmos, materialized in the form of transnational movements of theories and experts, inscribed in local

informational management systems such as S.T.O.P. and S.I.A.T.; the emergence of new organizations such as DAC and CEAMOS; and the construction of risk cartographies and images.

In this context, where risks and feelings are as important as crime itself, different mechanisms have emerged to extend police presence in the quest to become atmospheric, that is: pervasive and affective. That is the case of drone surveillance.

3.3 Mobilizing (in) security on air



The dynamic but abstract view of the algorithmic risk map is connected to a network of sensors distributed from the ground to outer space, especially visual ones: from surveillance cameras, some of them with facial recognition software implemented; cameras implemented in police cars with a software to identify car plates¹⁰⁵; body-worn police cameras; to multispectral cameras implemented in planes, helicopters, and remote-piloted aircrafts or drones; and the use of satellite imagery for intelligence purposes¹⁰⁶.

¹⁰⁵ Cameras have been implemented in the Dodge Charger Police Interceptor since 2014 and, more recently, in the Dodge Durango. Both include plate recognition software that alerts when there is a vehicle in the area with a complaint associated in real time. Information available at:

https://www.cnnchile.com/pais/carabineros-presento-los-nuevos-radiopatrullas-dodge-charger 20140307/ https://www.infodefensa.com/latam/2019/02/15/noticia-carabineros-incorpora-radiopatrullas-dodge-durango-police.html

¹⁰⁶ Carabineros obtain satellite images from the Chilean satellite Fasat Charlie, and from the acquisition of high-resolution sub-metric satellite images from other satellite databases. They use these for intelligence purposes, according to DAC interviewee. I will not analyze this, but it is relevant to keep it in mind, and might be an important point for a future investigation, especially for those researching police practices at the northern frontier.

I want to focus on the increasing extension of urban policing into the vertical field, through the implementation of drones in *carabineros*. In the context of risk management and persistent presence of feelings of (in)security in the city's imaginaries, drones not only form part of *carabineros*' preventive and investigative uses, but also seem to mobilize an affective capacity, making citizens feel safer through their presence. Based on interviews with two lieutenant colonels, I analyze the motivations for the introduction of drones in *carabineros*, their uses, and the capacities attributed to them, particularly, the extension of op-atmos by mediating sensations on air.

Before delving into this, a few words on local drone research. Most of the discussion and studies of drones in Chile have oscillated around their implementation in the Municipalities' Citizen Security forces, in relation to the human rights threat drones present on matters of privacy and social discrimination; and the state of the industry and its geopolitical economies¹⁰⁷. The case of Las Condes Municipality, one of the wealthiest municipalities of Chile led by mayor Joaquín Lavín, has gathered most of the attention, as it was one of the first that integrated surveillance balloons and later drones to watch over public spaces. It marked a precedent on its use, as it was sued by NGO Derechos Digitales due to its violations to privacy. The Court allowed them to use drones only if all the artefacts were operated by Municipal workers and/or police officers in public spaces (which they weren't doing at first, as a private company was operating them).

A particularly interesting research is the one conducted by sociologists Martín Tironi and Matías Valderrama (2017) on the use of drones in Las Condes. They noticed that beyond evidence collection and deterrence, Municipal operators attributed a third capacity to drones, an affective one: the creation ambiances of feelings of safety (206). However, through their fieldwork they noticed that citizens

¹⁰⁷ See for example Aliaga (2017) who explores the implementation of drones in Curicó, in southern of Chile; NGO Datos Protegidos (2017) analyzed the discourses, industries and their implications on human rights; and Becker (2017) researched human rights and industries in Latin America; and Leguina (2017), analysis from a legal standpoint.

perceive the visual and sonic presence of drones in multiple ways: from indifference or familiarity to feelings of violence or excessive invasion, complicating the official discourse and their attempt to aircondition the sky (221). Although I was not able to apprehend the nuances of citizens while under drone presence, *carabineros*, just like Municipal operators, attributed a similar capacity to drones, which I will explore throughout this chapter, keeping in mind that what they attribute is by no means what people feel. But this chapter is an exploration on *carabineros*' perspective on drones, not citizens. It seeks to present drone practices and the capacities *carabineros* attribute to them from an exploratory approach, as an open provocation.

From monitoring masses to the extension of affects

Two situations caused the implementation of drones in *carabineros*.

According to lieutenant colonel from the Department of Criminal Analysis, the integration of drones in policing was motivated by a controversial event that occurred in 2015: the hitting of 28-year-old student, Rodrigo Avilés, by *carabineros'* special forces water cannon truck during a students' protest in Valparaíso. A 4K video recorded by a DJI Matrice drone for TVN¹⁰⁸ news was a key evidence to counter the police narrative on the accident. They did not have any videos of the moment, but many people did, and they circulated through social media. As a result, they systematically started incorporating drones for monitoring social protests.

For lieutenant colonel from the Aerial Prefecture, drones were acquired in 2014 to supervise soccer activities, in the context of "Estadio Seguro" (Safe Stadium), a police special forces plan whose goal was surveilling "barras bravas" (Chilean football hooligans) and collecting images of those who

1.0

^{108 24} Horas. 2015. "Nuevas Imágenes Muestran Acción de Carro Lanza agua Contra Rodrigo Avilés En Valparaíso." 24 Horas. TVN. https://www.24horas.cl/nacional/nuevas-imagenes-muestran-accion-de-carro-lanzaagua-contra-rodrigo-aviles-en-valparaiso-1675711. And Cooperativa FM. 2015. "Conozca Detalles Del Drone Que Captó Las Imágenes de Avilés El 21 de Mayo." *Cooperativa FM*. Cooperativa TV. https://www.youtube.com/watch?v=vxO8EtfOTiE.

participated in disorders inside the stadiums, to use them as evidence and make feasible criminal prosecution.

In both social protests and safe stadium contexts, drones were mediating actions of police special forces (FF.EE) with a DJI phantom.

After that, they created an independent, remote-piloted aircraft (RPA) section, under the command of the Aerial Prefecture. The drone operators are all pilots who are acquainted with support procedures conducted by FF.EE., investigations for *carabineros*' drug agency (OS7), and for *carabineros*' criminal organizations investigations (OS9). In 2015 approximately, they purchased one military RPA, the Aeryon Skyranger, but then bought "many more. We took a leap in drones" as the DAC lieutenant commented on the interview.

An important affordance of the drones is their real-time transmission of images that, according to the DAC colonel, allows to take better decisions in the territory. In contrast with static surveillance cameras that can't follow a suspect or a target, and satellite images that are not transmitted in real time, drones have the affordance part of the possibility of being part of an operation. They can fix targets and follow them through the streets. According to aero-police, planes and helicopters don't transmit to the ground in real time, due to their microwave antennas.

How do they decide where and when to use these aerial systems? Who are the targets?

In the case of investigations, the "intelligence information signals, in a spatial and temporal way, where this transit of vehicles or people could take place", aerial lieutenant said. In the case of the northern frontier, they work with OS7 to "surveil, detect, and be ahead of what may happen". In the investigations¹⁰⁹ conducted in the city, they work with specialized units such as OS7 and OS9. For example, capturing drug trafficking evidence in a low-income neighborhood with a Skyranger 200

1.0

¹⁰⁹ PDI uses drones extensively in the program *Microtráfico 0* against drug dealing.

meters (about 2 blocks) away; using zoom to identify people and gather evidence. These characteristics are useful to detect and identify who (may) commit a crime.

We detect, then we zoom in and identify, and position those individuals who create disorder or generate deviation to the norm. They [drones] can take a position in the site of the incident and gather evidence to conduct the correspondent criminal prosecutions. (Lieutenant Colonel Aerial prefecture, 2019).

Increasingly, they moved the use of drones away from only for special operations, to everyday actions to "surveil high social risks slums".

In everyday operations, according to the interviewees, the use of drones is defined by the spatiotemporal information prepared by DAC. That is, the dynamic risk surfaces created by the predictive policing software. According to colonel from Aerial Prefecture, "a new thing we are doing now is the prevention of crimes that have increased through the geographical, temporal and spatial information the DAC gives us, to see when certain crimes occur". He continues,

Having the profile of both the criminal and the victim allows you to say "aha!, the criminal is here, I need to surveil these people because they (DAC) give you the characteristics, age range and everything else. So I surveil those who will probably commit a crime in that sector and time..

Furthermore,

We see vehicles that can be found in different places that do not correspond (to those spaces), or expensive vehicles in *poblaciones* (slums), which do not correspond to their incomes. You can check the car plate because you can identify it from a 300-meter distance. You ask Command and Control in *Carabineros*, and you can check if it is stolen or not.

This assertion reveals how drones put preemption and pre-visualization practices into action, extending the algorithmic mediation into the city's material spaces through the air, in an attempt to deter possible criminal actions. But, by doing so, it is also creating suspect zones, a banopticon in which identity control practices are legitimized by previously defined profiles from the view from above.

But aerial surveillance not only collects evidence and "preempts" crime by deterrence. *Carabineros* also attributes to it the affective capacity of generating feelings of safety. The management of risks becomes the management of affects, by the creation of security atmospheres (Adey 2014). For instance, in those risky sectors, they use the helicopter patrol during night "to generate the feeling of security among people, especially in those spaces were luminosity and the environment's condition favor crime", as colonel from Aerial Prefecture said. Helicopters not only fly, but they illuminate the space to "provoke" safety. This has caused controversy, especially among the people living under these night lights, which mainly fly in the "risk zones" of the city.

To generate a feeling of safety is also the focus of the recently inaugurated *plan Telegivilancia* by the Santiago Administration (*Intendencia*).

"We are patrolling with drones four places defined by *Intendencia*, *carabineros* and the Undersecretariat of Crime Prevention, first of all, to generate the feeling of safety because they see the device, they know it's there. And we will also see, with the mobility of crime, if the complaints augment in the places where we are flying."

The centrality of the feeling of safety in policing is also connected to its quantification. Through the use of surveys¹¹⁰, those intangible elements have become quantifiable, entering the world of engineering as a force that shapes the policies around security to create conditions of "safety", embodying a *politics of possibility* (Amoore 2013). That is expressed in the words of the DAC colonel,

The feeling of safety can be measured only by the increment or decrease of crime cases. That's the only way to measure it as far as I know, because the ENUSC don't include a question regarding victimization. To be considered a victim of crime. There is a victimization thermometer in ENUSC in the zones that were patrolled, to increase the feeling of safety. That is an instrument that we need to build to ask exclusively what you feel when you hear the helicopter. That instrument hasn't been built yet, to determine the influence of the institution's aerial means on crime prevention. (...) I'm in the paperwork to build an instrument to be able to measure that feeling's effect, [but] it is complex because in the end it is a value judgement,

¹¹⁰ An important survey is the National survey of urban citizen security (ENUSC) developed by the Undersecretariat for the Prevention of Crime with the support of the National Statistics Institute (INE) since 2003, measuring both victimization and insecurity. Available at http://datos.gob.cl/dataset/9926

it is not so much an statistics instrument. If we always fly over a *población* (low-income neighborhood), they will tell me *yes*, *I feel safer*."

Even though he recognizes the intrinsic paradox of translating feelings into numbers, there is anxiety for turning the world into digits, statistics, records, that can be later processed, guiding and legitimizing their everyday practices.

In summary, op-atmos in the urban space

Throughout this chapter, I have examined the informational, algorithmic, and unmanned aerial systems mediating *carabineros*' work in urban spaces, conceived as the location of calculable risks mobilizing preemptive actions to affect feelings of (in)security. By the implementation of a local version of CompStat, the integration of predictive policing, and the use of drones, policing has increasingly expanded beyond the realm of preemptive actions into the formation of ambiances of "safety", becoming atmospheric, pervasive, and affective.

The emergence of this policing assemblage is the result of transnational movements of theories, technologies, and experts, intimately connected to policing paradigms and practices advanced in the United States: broken windows theory, zero tolerance policy, the statistics risk management system CompStat, and PredPol.

Due to the limited time of this research, I was only able to analyze the formation of these new policing infrastructures, in which certain theories and worldviews are encoded into algorithmic systems of management that discipline *carabineros'* gaze and guide their ground movements. However, I was not able to observe how this new policing infrastructures are actually being put to work in

carabineros' everyday labor as they collect data, parse information, move through demarcated red zones looking for profiled suspects, and mobilize drones on air to extend their presence and "secure" spaces. I think it is extremely important to engage in this kind of research in the future, to complicate the view I am presenting here and grasp other nuances that appear when these systems are embodied on the ground.

4. Final Thoughts

Over the course of this thesis, I have critically explored how mediation processes are becoming integral to policing practices in Chile, mobilized by feelings of fear and insecurity in the contexts of so-called "rural terrorism" and the urban fight against crime. From the expansion of aerial remote sensing to the implementation of algorithmic risk cartographies, the anatomy of power is rapidly transforming, incorporating in its orchestration of powers novel zones of action that instead of solving problems more effectively are complicating preexisting tensions. In the name of efficiency, algorithmic processes create dynamic risk surfaces and suspects' profiles, legitimizing differential police practices throughout the city. Due to their opacity combined with their aura of neutrality, technologies have served as tools of deception and incarceration of Mapuche people.

In order to grasp this complex panorama, I offered the notion of *operational atmospheres* as a concept to think with and shed light on the contemporary composition of power, in which local histories, imaginaries, and feelings, are traversed by transnational ideas, affects, economies, technologies, and practices of security, increasingly located in a vertical and algorithmic field of actions. Operational atmospheres can adopt many shapes as they mobilize particular feelings and imaginaries; put specific theories and logistics of perception in motion, and extend a network of artefacts through the air and the spectrum, which can modify life on the ground. In their formation process, op-atmos partake in the definition of what counts and who can be perceived as a criminal or a terrorist; for whom and when; and the ways in which those others get to be governed.

Even though op-atmos may appear as pervasive and omnipresent, in a way, unescapable; they are fragile, partial, and contingent, grounded on labor-intensive processes, through which they come to exist. In the words of Donna Haraway (1988), they are *situated knowledges* which can and need to be

located in order to be critically opened and studied. Following that premise, I have pulled different threads to disentangle the shapes op-atmos take in two contexts, and their consequences on the (re)production of 'Others': the Mapuche as a "terrorist", and the "urban poor criminal".

In the context of "rural terrorism", I grounded the research in three particular events: 1) the killing of Camilo Catrillanca by *Comando Jungla*; 2) the fake intelligence police operation, *Operación Huracán*; and 3) the introduction of aerial surveillance in the "red zone" of Mapuche territories in the south of Chile. Throughout this process, I analyzed how op-atmos take part in the construction of the Mapuche as terrorist, based on local colonial histories, in the context of neoliberal multiculturalism. In these, the figure of the *indio prohibido*, who opposes to extractive uses of land, is crossed by the transnational imaginaries of the terrorist. The constitution of this space as both a geopolitical internal frontier, and as a frontier with the Mapuche insurrectionary "other", legitimizes the deployment of a series of military techniques and technologies mediating this conflict.

In this setting, op-atmos are continuously extended to maintain the hegemonic presence of the state in this "red-zone", by rendering the vertical, spectral, and algorithmic fields' operation-ready. By strategically occupying the sky, op-atmos can expand the state's necropower onto the ground. By intercepting, hacking, scamming, and strategically positioning information on the media coverage, op-atmos can facilitate the production of an *aesthetics of deception*, to script Mapuche as terrorists and incarcerate them. By extending buzzing drones and helicopters, they invade intimate mourning processes, provoking terror from the air. And environmental states of emergency are easily transformed into opportunities to legitimately implement more military forces to become permanent, such as the use of aerial surveillance from spy planes to drones.

In the context of urban policing and the fight against crime, I explored how the city is conceived by the police as both a space of incommensurable feelings of insecurity, and the location of big data translatable into calculable risks, to guide their daily operations. Especially influenced by U.S. theories and practices of security - Kelling's broken windows, Giuliani's zero tolerance, Bratton's CompStat, and Brantingham's PredPol – policing practices have expanded its realms of operation beyond the focus on crime, to the creation of normalized environments.

I analyzed this policing transformation and its relation to three technological systems mediating the work of *carabineros*: 1) the introduction of a local version of CompStat information management system (S.T.A.D., later S.T.O.P), 2) the development of predictive policing cartographies by local engineers and mathematicians, and 3) the extension of drones to monitor massive events, conduct investigations, and exert an affective force through their presence in the environment. Combined, the police's realm of operations has become increasingly mediated by practices of previsualization: they follow algorithmically created cartographies that produce red zones of risk, promoting differential policing practices by producing zones of intensive police presence and patrolling. Through the production of suspect profiles, op-atmos produce targets of surveillance, monitor and control.

At first sight, the two contexts I explored may look extremely disparate, complete opposites. One based on spectacular irregular practices; while the other is grounded on silently calculated everyday practices. However, both shared similar mechanisms that I described as operational atmospheres. They are mobilized by feelings of insecurity, fear or terror; they combine vertical and algorithmic strategies; both are based on and participate from the production of red zones materialized in differential policing practices; and they seek to create pervasive ambiances of safety for some, fear for the others they help to construct.

In the rocky terrain this thesis navigated, more than a quest for answers, its goal was to locate and open contemporary mechanisms of security operating in Chile to public scrutiny; to denaturalize and dismantle the neutrality and effectiveness attached to the implementation of new technologies in policing in order to prompt reflections and complicate established discourses. In this process, I stepped into both spaces of power and worlds of resistance to turn the state into an object of study. There are many spaces and matters that I could not explore. Nonetheless, I hope this research helps as a provocation to think on the complex mediation processes at play in state security and policing practices, and their consequences in the construction and control of the state's 'others'.

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