

RESEARCH ARTICLE

Thermal Violence: The Politics of Climate Control in Brazil's Prisons

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Abstract

This article explores the intersection of carceral geographies and climate (in)justice in Brazil, home to one of the world's largest incarcerated populations. Drawing on ethnographic fieldwork, interviews and an analysis of reports from monitoring organisations examining facilities across the country, we ask how thermal conditions are part of a national project of inflicting suffering within the prison system. Conductive building materials, a lack or excess of water and ventilation, as well as overcrowding, exacerbate exposure to scorching heat or bone-chilling cold, subjecting prisoners' bodies to extreme temperatures. We argue that this constitutes a form of thermal violence, in which heat and cold are weaponised to harm and punish.

Keywords: prison; violence; heat; cold; Brazil; thermal control

September 2023, Igarassu, metropolitan region of Recife, capital of Pernambuco, Brazilian northeast. In a few days the rains would be over and the hottest days of the year would arrive. In fact, it was already very hot, in the high 80s (29 °C), hot enough for us to need the air conditioning on in the car as we exited the highway and turned onto the narrow dirt road that leads up to the Igarassu prison. Surrounded by overgrown green bushes on both sides, the steep path ascended, erosion worsened by the recent downpour. Cars struggled, wheels at times catching and spinning in the eroded ground. After considerable effort, we pulled up to the entrance of the prison unit, grateful to have not been swallowed whole by the dark, grey mud.

Groups of women stood outside of the unit, small tattered umbrellas up to provide a semblance of shade. Others waited under the narrow awnings of a few small snack stands. It was not a visiting day so I imagined they were at the unit to try to resolve a bureaucratic issue of some sort on behalf of an imprisoned relative. All were Black

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or Brown women, dressed nicely to meet with prison officials. Hopeful of having their requests approved. All probably made a great effort to be there on a weekday.

Accompanied by a missionary who was there to hold services in the prison's evangelical theological school, we moved through the series of holding areas that separated the exterior from the interior. After these checkpoints, we entered a labyrinth with white and green walls, passing through an intricate maze of corridors. Visibly older, run-down parts abutted newer sections, creating a patchwork, improvised appearance. The wings that held the prisoners were separated from each other by thick concrete walls and bars. Once inside the prison, we noted a kind of informal co-management arrangement between prison employees and the prisoners: inmates themselves filled the function of chaveiros.\(^1\) That is, they were responsible for unlocking, opening and closing the gates that separated wings from other spaces of the prison.

As we passed through the locked spaces to go deeper inside, it became noticeably darker and hotter, as if we were entering a cave. Indoors, the lack of sunlight gave way to a still and stifling humidity. A mouldy smell permeated everything. Outside the metal-bar corridors, a blinding, headache-inducing sun baked the cement floors. Inmates operated various machines in a shed outside the cell blocks, cutting pieces of wood and assembling furniture. Exacerbated by the constant humming of machinery, the heat was unbearable. Particle board dust hung in the air and littered the floor. It was still technically winter, but inside Igarassu it was pervasively, unrelentingly, hot.

The prison unit, at that time, housed more than 5,000 men, a mixture of those in pre-trial detention and those serving out sentences. A report published several months after my visit suggested that the prison was running at four times its capacity.² Prisoners slept on the hard ground outdoors, exposed to the sun and rain. Those who wanted less harsh conditions could bribe their way to slightly better cells and shelter from the elements.³

Based on an ethnographically informed analysis of prison conditions at a range of facilities across Brazil, we argue that the sort of extreme thermal exposure described above is not exceptional. Rather, it is a part of the everyday experience of hundreds of thousands of incarcerated Brazilians. In what follows, we detail how temperature, or thermal conditions more broadly, is weaponised to produce suffering in carceral settings.

¹To better understand the function of *chaveiros* (literally 'key-holders'), see Juliana Torres Y Plá Trevas, 'Mulheres, afetos e estratégias de sobrevivência em prisões de Pernambuco', unpubl. PhD diss., Universidade Federal de Pernambuco, 2023, pp. 136 *et seq.*; Sacha Darke, 'Inmate Governance in Brazilian Prisons', *Howard Journal of Crime and Justice*, 52: 3 (2013), pp. 272–84 and 'Managing without Guards in a Brazilian Police Lockup', *Focaal*, 68 (2014), pp. 55–67.

²'Relatório do MPF aponta problemas em 11 unidades prisionais de Pernambuco', Central Brasileira de Notícias (CBN) Recife, 19 March 2025: https://www.cbnrecife.com/artigo/relatorio-do-mpf-aponta-problemas-em-11-unidades-prisionais-de-pernambuco (URLs last accessed 28 June 2025).

³This vignette is based on field research carried out by Barbosa de Carvalho.

Because the prison is a racialised territory, thermal violence in prisons must be understood as a type of racialised violence, subjecting predominantly Black- and Brown-skinned people to extreme suffering and humiliation. Working across both US and Brazilian contexts, Jaime Alves and Joy James have shown how anti-black state terror plays a foundational role in upholding 'democracy', producing a 'racialised rights regime, in which Black people are framed as dangerous or criminal - constructed as 'deserving' of punishment without limit or legal regulation. 4 Black feminist approaches to the history and functioning of Brazil's criminal justice system from the colonial period onward have also overwhelmingly demonstrated the connection between structural racism and mass incarceration, pointing not only to the ongoing over-representation of Black people in the criminal justice system but also to the overrepresentation of white people in positions of power in the system. Juliana Borges, for example, notes that over 84 per cent of the judges and magistrates in the Brazilian court system are white.⁵ Brodwyn Fischer, Keila Grinberg and Hebe Mattos have also noted how Brazil's unequal rights regime is marked by racial silencing, where the role that racism plays in furthering inequality and suffering is elided and erased, especially in the discriminatory practices perpetrated by police and justice systems that produce a racially unequal punishment system.⁶ Thus, from the outset, we want to emphasise that the thermal violence we seek to detail here must be understood in racial terms.

According to the Fórum Brasileiro de Segurança Pública (Brazilian Public Security Forum, FBSP), Brazil is among the countries with the highest incarcerated population, occupying third position, behind only the United States and China.⁷ In

⁴Joy James and Jaime Amparo Alves, 'States of Security, Democracy's Sanctuary, and Captive Maternals in Brazil and the United States,' Souls, 20 (2018), pp. 345–67, here p. 350.

⁵Juliana Borges, *Encarceramento em massa* (São Paulo: Sueli Carneiro, Polen, 2019). See also Enedina do Amparo Alves, 'Rés negras, judiciário branco: Uma análise da interseccionalidade de gênero, raça e classe na produção da punição em uma prisão paulistana', unpubl. MA diss., Pontifícia Universidade Católica de São Paulo, 2015, p. 25; Carla Adriana da Silva Santos, 'Ó *Pa Í, Prezada!* Racismo e sexismo institucionais *tomando bonde* no Conjunto Penal Feminino de Salvador', unpubl. MA diss., Universidade Federal da Bahia, 2014, p. 64.

⁶Brodwyn Fischer, Keila Grinberg and Hebe Mattos, 'Direito, silêncio e racialização das desigualdades na história afro-brasileira', in George Reid Andrews and Alejandro de la Fuente (eds.), *Estudos Afro-latino-americanos: Uma introdução* (Buenos Aires: CLACSO, 2018), pp. 163–215; see also Juliana Vinuto, 'Contribuições de Lélia Gonzalez aos estudos sociológicos sobre controle social e punição no Brasil', *Civitas*, 22 (2022), pp. 1–11. For an analysis of how similar dynamics are at play in Puerto Rico see Marisol LeBrón, *Policing Life and Death: Race, Violence and Resistance in Puerto Rico* (Oakland, CA: University of California Press, 2019).

⁷The Fórum Brasileiro de Segurança Pública (Brazilian Public Security Forum, FBSP) estimates that Brazil's incarcerated population in 2022 numbered 832,295 people, a rate of 409.9 people imprisoned per 100,000 inhabitants. Of these, 786,907 were men and 45,388 were women. 442,033 were Black, 197,084 were white, 7,139 were of Asian descent, and 1,603 were Indigenous. Between 2000 and 2010, the imprisoned population more than doubled, and it has continued to grow since. This is precisely the period when the war on drugs and 'organised crime' intensified in the country. A particular characteristic of Brazil's incarcerated population is that of the more than 800,000 people imprisoned, 233,827 were provisional detainees, that is, prisoners awaiting trial. Moreover, recent changes to drugs laws have resulted in an increase in the prison population: Law 8.072 of 1990 toughened punishment for drug dealing, making it a more serious crime, while Law 11.343 of 2006, known as the 'Lei de Drogas', has left an enormous grey area between drug users

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Brazil, similarly to other parts of Latin America, the significant expansion of the carceral population was the direct result of legislative changes, especially those introduced since the early 2000s, that toughened sentencing related to drug use and drug distribution, while also increasing the frequency of pretrial detention. As a result, alongside other Latin American countries, Brazil has experienced a dramatic increase in the size of its imprisoned population, with Black Brazilians significantly overrepresented.

We write from a perspective which aligns with other work in the field of Brazilian prison studies, out of a desire to raise awareness of dehumanising and violent conditions and in solidarity with social movements fighting for the lives and rights of imprisoned individuals. In both the academic and activist agendas, there is a strong criticism of reformist visions which propose that building more prisons or making prisons 'better' will fix the problem; instead, scholars critique such positions as justifying the expansion of the punitive machinery itself rather than rejecting it or abolishing it as an anti-black institution all together. Building on these views, we join critical prison scholars in working from an understanding that the prison is, in the general sense, a 'carceral space ... designed to function as a shelter that does violence and

and drug dealers, with charges at the discretion of arresting officers and other police officials. See FBSP, *Anuário Brasileiro de Segurança Pública 2023* (São Paulo: FBSP, 2023): https://forumseguranca.org.br/wpcontent/uploads/2023/07/anuario-2023.pdf.

⁸Karina Biondi, *Sharing This Walk: An Ethnography of Prison Life and the PCC in Brazil* (Chapel Hill, NC: University of North Carolina Press, 2016); Bruna L. Bumachar, 'Nem dentro, nem fora: A experiência prisional de estrangeiras em São Paulo', unpubl. PhD diss., Universidade Estadual de Campinas, 2016; Graham Denyer Willis, 'Eating Pizza in Prison: Failing Family Men, Civil Punishment, and the Policing of Whiteness in São Paulo', *American Ethnologist*, 49: 2 (2022), pp. 221–33; Paulo César Ramos and Siri Völker, 'Police Violence against People is on the Rise in Brazil', *GIGA Focus Latin America*, 5 (2020), pp. 1–11; Jacqueline Sinhoretto and Danilo de Souza Morais, 'Violência e racismo: Novas faces de uma afinidade reiterada', *Revista de Estudios Sociales*, 64: 2 (2018), pp. 15–26.

⁹Caroline Mary Parker and Julienne Weegels, 'Carceral Citizenship in Latin America and the Caribbean: Exclusion and Belonging in the New Mass Carceral Zone', *European Review of Latin American and Caribbean Studies*, 116 (2023), pp. 69–85; Caroline Mary Parker and Amaya Perez-Brumer, 'Incarceration and Racism in the Americas: Notes for Future Internationally Comparative Research on Racial Inequality and Imprisonment', *Incarceration*, 5 (2024), pp. 1–19.

¹⁰Fabio Magalhães Candotti, "Quando a massa erra, o estado avança": Notas sobre transformações carcerárias e criminais em Manaus, *Tomo*, 40 (2022), pp. 197–240; Juliana Farias, Natália Bouças do Lago and Roberto Efrem Filho, 'Mães e lutas por justiça. Encontros entre produção de conhecimento, ativismos e democracia', *Sexualidad*, *Salud y Sociedad*, 36 (2020), pp. 146–80; Rafael Godoi, *Fluxos em cadeia: As prisões em São Paulo na virada dos tempos* (São Paulo: Boitempo, 2017); Rafael Godoi *et al.*, 'Epistemopolíticas do dispositivo carcerário paulista: Refletindo sobre experiências de pesquisa-intervenção junto à Pastoral Carcerária', *Revista de Estudos Empíricos em Direito*, 7: 1 (2020), pp. 143–58; Fábio Mallart, *Findas linhas: Circulações e confinamentos pelos subterrâneos de São Paulo* (Lisboa: Etnográfica, 2021); Paulo Cesar Malvezzi Filho, 'Máquinas de massacre: A produção da morte e da sobrevivência no Compaj', unpubl. MPhil diss., Universidade Federal de São Paulo, 2021; Adalton Marques, *Humanizar e expandir: Uma genealogia da segurança pública em São Paulo* (São Paulo: IBCCRIM, 2018); Vera da Silva Telles *et al.*, 'Combatendo o encarceramento em massa, lutando pela vida', *Caderno CRH*, 33 (2020), pp. 1–16; Vera da Silva Telles *et al.*, 'Tramas da vida e maquinaria punitiva: Vidas enredadas nas malhas da justiça criminal', *Teoria e Cultura*, 19: 1 (2024), pp. 19–33.

kills by letting die.'¹¹ Intentional exposure, or the failure to mitigate exposure, to climate extremes including cold, heat or flooding is increasingly playing a role in shaping the kinds of violence, humiliation and harm that incarcerated individuals suffer on a regular basis. We see this as an important, albeit understudied, element of everyday suffering in Brazil's prisons. This article is a first attempt to demonstrate how thermal violence is taking place inside of facilities across the country.

Thermal Violence

Building on the work of media studies scholar Nicole Starosielski, who defines thermal violence as 'a manipulation of a body's capacity to mediate heat', or 'a means of altering the body as a medium, either making it transmissive or forcing it to store excess heat, 12 we understand the practice not just as mere exposure to extreme thermal conditions, but as the manipulation of ecologies, systems, and environmental and infrastructural elements in order to alter a person's ability to mediate temperature. Thermal violence, like other forms of violence, is not experienced uniformly by all, but has an outsized impact on the most vulnerable, worsening the already precarious conditions of those situated on margins that are themselves already thermally and racially marked.

In Brazilian prisons, as we will discuss, bodies become heat stores. Prisoners are punished under the scorching sun. Bodies are turned into heat transmitters, in overcrowded cells without adequate ventilation, where constant and unavoidable physical contact with fellow inmates worsens the sensation of heat. Like Starosielski, we also understand that this type of violence is mobilised to cause suffering while deflecting blame from its perpetrators, since the responsibility is easily directed onto 'natural' environmental conditions, constituting a kind of 'no-touch torture'. Perpetrators 'harness both the power and the excuse of climate'. Is

While the concept of thermal violence is somewhat novel, the use of temperature to punish is not. Both cold water and the use of extreme heat mediated through a device known as the 'sweatbox', a wooden coffin-like enclosure set in the direct sun, have long been used to inflict pain, including as torture devices in Vietnam, China and, most recently, by US forces in Iraq. And as Starosielski notes in regard to the

¹¹Alex R. Colucci, Daniel J. Vecellio and Michael J. Allen, 'Thermal (In)equity and Incarceration: A Necessary Nexus for Geographers', *Environment and Planning E: Nature and Space*, 6: 1 (2023), p. 639. Under such circumstances, incarcerated people and their families are faced with the need to organise to cope with and resist the extreme conditions in which they find themselves. After all, survival is based on a necessarily collective effort. Incarcerated people and their families join together to create collective pressure and to denounce abuses. One part of Brazilian prison studies focuses on socio-technical networks that support the resistance and survival of imprisoned people. Works by Natália Lago, Natália Corazza Padovani, Candotti, Trevas, Godoi and Bumachar argue for a conceptualisation of prisons as porous, home to diverse networks both inside and outside institutional walls: Natália Lago, 'Na "linha de frente": Atuação política e solidariedade entre "familiares de presos" em meio à Covid-19; *Dilemas, Reflexões na Pandemia* (2020), pp. 1–9; Natália Corazza Padovani, *Sobre casos e casamentos: Afetos e amores através de penitenciárias femininas em São Paulo e Barcelona* (São Carlos: EdUFSCar, 2018); Candotti, 'Quando a massa erra, o estado avança'; Trevas, 'Mulheres, afetos e estratégias de sobrevivência'; Godoi, *Fluxos em cadeia*; Bumachar, 'Nem dentro, nem fora'.

¹²Nicole Starosielski, *Media Hot and Cold* (Durham, NC: Duke University Press, 2022), pp. 111–12.

¹³*Ibid.*, p. 112.



Figure 1. Johann Moritz Rugendas, *Negros no fundo do porão* ('Blacks in the Ship's Hold'), 1835 *Source: Enciclopédia Itaú Cultural de Arte e Cultura Brasileira* (São Paulo: Itaú Cultural, 2025): http://enciclopedia.itaucultural.org.br/obras/83558-negros-no-fundo-do-porao.

widespread use of the sweatbox in carceral settings and to discipline enslaved Africans in the US Antebellum era, heat has historically been used as means of racialised control. Lextending this reflection to the Brazilian context, other resonances can be found, for example, in the stuffy and overcrowded slave ships (Figure 1), or in the whipping posts placed under the scorching sun. We understand the modern-day Brazilian prison as operating more or less as a giant sweatbox (see Figure 2), an example of how cruel white supremacist ideologies and the legacies of slavery continue to manifest in the current era. Theorist Christina Sharpe has described this ongoing element of Black experience as being in 'the wake' (the wake of the slave ship) – an existential state related to 'the continuous and changing present of slavery's as yet unresolved unfolding' and shaped by living with the immanence of death.

Most thermal violence is mundane and unspectacular. Like other forms of structural violence, it often does not overtly depend on the agency of someone identifiable, making it more difficult to see it as violence per se, despite the extreme everyday harm it inflicts.¹⁷ Our goal here is to denaturalise the use of thermal violence in prison settings, rendering it visible and identifying it as a force of everyday suffering for Brazil's carceral population. As we will show in the following pages, both the frequency of, and the commonalities between, incidents of thermal violence across different regions

¹⁴Nicole Starosielski, 'Thermal Violence: Heat Rays, Sweatboxes and the Politics of Exposure', *Culture Machine*, 17 (2019), pp. 1–27. See also Ralph on the connection between dehumanisation, race and torture: Laurence Ralph, *The Torture Letters: Reckoning with Police Violence* (Chicago, IL: University of Chicago Press, 2020).

¹⁵João H. Costa Vargas, *The Denial of Antiblackness: Multiracial Redemption and Black Suffering* (Minneapolis, MN: University of Minnesota Press, 2018).

¹⁶Christina Sharpe, *In the Wake: On Blackness and Being* (Durham, NC: Duke University Press, 2016), pp. 14–15.

¹⁷Erika Robb Larkins, *The Spectacular Favela: Violence in Modern Brazil* (Oakland, CA: University of California Press, 2015).



Figure 2. Detainees observed sleeping on the floor of the Ary Franco Prison, Rio de Janeiro, during an inspection visit

Source: Mariana Simões, 'A "pior prisão do Rio de Janeiro" em tempos de coronavirus', *Pública*, 12 May 2020: https://apublica.org/2020/05/a-pior-prisao-do-rio-de-janeiro-em-tempos-de-coronavirus/.

of the country suggest a national project that normalises the suffering of incarcerated people through the creation of thermally harmful environments.

Eighty years ago, in 1943, Brazil's government included 'thermal comfort' (conforto térmico) in its 'Consolidação das Leis do Trabalho' (Consolidated Laws of Workers' Rights), and much of the global research on personal heat exposure and experiences of heat has centred around this concept, defining thermal comfort as 'how heat is perceived and experienced by the human body' and continuing: 'Thermal comfort is influenced by ambient air temperature, air speed, humidity, radiant temperature, clothing insulation, and the body's metabolic rate.' However, researchers working on climatic conditions in US prisons have problematised everyday understandings of comfort that imply 'satisfaction or pleasure', suggesting instead that we think of comfort as a human right or a public health issue. 19

¹⁸Ladd Keith and Sara Meerow, *Planning for Urban Heat Resilience* (Chicago, IL: American Planning Association, 2022), p. 13.

¹⁹Anna Terwiel, 'What is the Problem with High Prison Temperatures? From the Threat to Health to the Right to Comfort', *New Political Science*, 40: 1 (2018), pp. 70–83. By way of comparison, it bears noting that the state of Texas, located in the US south and home to one of the largest carceral populations in the country, does not provide climate control in its prisons. We mention this here not just as a point of comparison but also to underscore the widespread global use of thermal violence. In Texas and other parts of the US southwest, family members of imprisoned individuals, their lawyers and human rights observers suggest that people

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Nonetheless, in Brazil and beyond, popular resistance to providing even the barest thermal comfort to prisoners is still the norm. When talking to one formerly incarcerated man in Rio, we explained that many prisons in the United States have climate control, ²⁰ a fact which he found literally laughable. 'Prisoners would never, ever be given air conditioning in Brazil', he affirmed, continuing to chuckle. 'Society already thinks we deserve to suffer. That we deserve nothing. Why would they make us comfortable?' As he notes, the logic of incarceration as deserved suffering permeates Brazilian social relations, directly enabling the weaponisation of climate conditions, among other tactics, to inflict that suffering.

In what follows, we examine how various manifestations of thermal power are exercised in prison settings. This includes an examination of how carceral spaces as built environments inflict both extreme heat and extreme cold on incarcerated individuals. While the prison is always a space intended to contain and isolate we are interested, in this particular case, in how building materials, water and ventilation (or lack thereof) increase and mediate exposure to extreme temperatures, raising humidity and increasing the heat index in some cases or increasing exposure to cold in others. We also discuss more direct forms of thermal violence, showing how temperature is weaponised as means to harm and punish.

Methodology

This article draws on a range of sources, including Barbosa de Carvalho's fieldwork in prisons in the state of Alagoas and her research engagement with formerly incarcerated people and their families in northeastern Brazil (2020–4). This perspective is complemented by Robb Larkins' fieldwork with criminal lawyers and formerly incarcerated people in the state of Rio de Janeiro and with ex-federal prison inmates and their spouses and families (2021–4). In addition to more traditional ethnographic methods and interviewing, and in order to broaden the regional range of our analysis, we also engaged in close readings of 15 reports on prison conditions across five states. We selected reports from well-respected civil organisations and public entities with legal legitimacy to carry out inspections in prison units and with a long history of defending human rights, including the Mecanismo Nacional de Prevenção e Combate à Tortura (National Mechanism for the Prevention of and Combat against Torture, MNPCT), the Mecanismo Estadual de Prevenção e Combate à Tortura do Rio de Janeiro's State Mechanism for the Prevention of and Combat

are literally 'cooked alive' in the summer months, sparking an ongoing debate about inhuman treatment and the need to install air conditioning. Proponents of legislation requiring air conditioning say that heat is a critical health concern for incarcerated people; opponents say that to provide cooling would offer unjustified 'comfort' to criminals. For a summary of the ongoing debate, see John Yang *et al.*, 'People in Prison Struggle to Survive Unrelenting Heat without Air Conditioning', PBS News Weekend, 15 July 2023: https://www.pbs.org/newshour/show/prison-inmates-struggle-to-survive-unrelenting-heat-without-air-conditioning#.

²⁰Madison Pauly, 'As Texas Enters Another Hot Summer, Lawmakers Kill Efforts to Cool Sweltering Prisons', *Mother Jones*, 30 May 2021: https://www.motherjones.com/crime-justice/2021/05/texas-prisons-air-conditioning/; 'Debate over Air Conditioning in American Prisons Will Heat Up', *The Economist*, 19 March 2022: https://www.economist.com/united-states/2022/03/19/debate-over-air-conditioning-in-american-prisons-will-heat-up.

²¹Quotes from ex-inmates were gathered during fieldwork.

against Torture, MEPCT/RJ), the Comitê Estadual de Prevenção e Combate à Tortura do Rio Grande do Norte (Rio Grande do Norte's State Committee for the Prevention of and Combat against Torture, CEPCT/RN), the Pastoral Carcerária (Catholic Prison Ministry, PaC), and reports produced by the Universidade Federal do Rio de Janeiro (UFRJ) and other research and activist organisations.²² Due to a scarcity of information, we were not able to cover all regions of the country, by necessity focusing on states with greater public dissemination of information about failures to meet national standards. In our analysis of the reports, we searched for information about the physical conditions of the inspected units, as well as descriptions of the thermal conditions, focusing on heat, cold, humidity, salubriousness, ventilation, access to water and food and the impact of infrastructural conditions on inmate health. Although the reports do not detail these failures to meet national standards in precisely the same terms as those that we adopt here, i.e. as thermal violence, the conditions they describe show precisely how the material conditions of prisons in Brazil are produced or allowed to deteriorate.

We understand the reports as partial and incomplete, unable to capture conditions in their entirety. One of the challenges that we consider especially relevant to mention, and that directly limits the type of information that is available for analysis, concerns the very access to prisons, which often occurs only through a 'guided tour'. That is, the *diretor* (prison warden or governor) decides what parts of the prison the inspectors can access, using the justification that it is necessary for them to restrict unimpeded access for the safety of all. Given this, it is quite possible that the conditions in the restricted access spaces are even worse than what is recorded in the reports.

Lastly, we would like to underscore that our data comes not only from facilities across the country but also spans the various types of detention facilities in operation – holding cells in jails, juvenile facilities, state prisons and federal prisons. The federal prison data that we present here, and which draws exclusively on interviews with previously incarcerated individuals, their spouses or family members, their lawyers and their pastors, is especially important because there is little information available about these kinds of prisons.²³

Built for Precarity: Temperature Extremes and Thermal Conduction

September 2015, a hot afternoon in Maceió. I was helping to conduct interviews with teenagers incarcerated in a male juvenile facility in an urban area within Maceió, Alagoas.²⁴ On that day of fieldwork, the interview took place in an office where psychologists and social workers worked – that is, we were not inside the

²²For example, the Defensoria Pública do Rio de Janeiro (Public Office of the Ombudsman, Rio de Janeiro, DP/RJ) and the 'InfoVírus: Prisões e Pandemias' ('InfoVirus: Prisons and Pandemics') project undertaken by the Universidade Federal de Santa Catarina (UFSC).

²³Some of the few reports we found on inspections of federal prisons are on the website of the Conselho Nacional de Política Criminal e Penitenciária (National Council for Criminal and Penitentiary Policy, CNPCP): https://www.gov.br/senappen/pt-br/composicao/cnpcp/relatorios-de-inspecao. The CNPCP is a state body, linked to the Secretaria Nacional de Políticas Penais (National Secretariat for Penal Policies), which may explain the differences in methodology (types of access to prison units and intended purposes of the information provided) between their reports and the ones we used in this research.

²⁴Juvenile facilities serve to incarcerate boys and girls under 18 years old convicted of criminal acts.

detention unit itself. The teens were chosen by prison staff to be interviewed and then brought to the office to meet with us. Given that they spent most of their days inside their cells, going out to talk to someone different was notable, a big deal.

It was a research day similar to many others in the penal system. We would settle into the space provided and wait for an adolescent to be brought in. Each interview day, depending on how much time we had, we would interact with one, two or even three teens. Eventually, something unexpected happened, as was the case with a youth named Pedrinho. During his interview, at the very beginning of the conversation, he interrupted the flow of questions to ask for water. He said he was feeling dizzy. A guard, who was keeping watch outside the room, let him go out to get some cold water from a water cooler usually reserved for the staff.

Pedrinho returned happy, holding a plastic cup containing the cold liquid. He told us he had not had water to drink for a long time. We went back to our conversation, and he talked in great detail, speaking in an animated fashion about his life, family, childhood and also the misadventures and dangers he had experienced until his arrest. But his intense recounting was interrupted by a nagging dizziness. He seemed affected by the memories, but he also said he was also unaccustomed to all the space, the breeze, and especially the open window, that he was experiencing during the interview. Fresh air and sunlight filled the room. He said he spent a lot of time in his dark, stuffy cell. He also said that prisoners in his unit had not been allowed to go outside into the yard for some time. That is, he had been only under artificial lighting – inside a small, hot cell – for a long time. The light and fresh air, together with the memories, were a shock to Pedrinho's system. ²⁵

Prison buildings are constructed with cheap building materials that conduct heat and raise temperatures, reducing thermal comfort. A female interlocutor described the female unit in an urban area she was housed in Alagoas: 'We had a very serious heat problem there because the women's prison was built as a place with a lot of concrete. The structure came in already assembled modules. So it's extremely, extremely hot.' Indeed, the use of cheap prefab modular designs dominates the prison construction

²⁵This vignette is based on field research carried out by Barbosa de Carvalho. Although we do not disregard the fact that Pedrinho's feelings of unease could be related to the memories brought up by the interview, reports from other collaborators in this research allow us to affirm that illness and discomfort can result when going out after having spent long periods in solitary confinement, with low lighting and little variation, including in the surfaces you walk on and the horizon you can see. Such reports were most vividly brought to life by a collaborator who had been incarcerated in a federal prison, where solitary confinement as a form of punishment is more common than in other carceral settings. As he put it:

From your cell, you can only see a very short distance. From one side of the cell to a few metres away to the other side. Out the window, you can't see anything but a small slice of sky. High up so it's just blue. Maybe sometimes a cloud. Your eyes forget how to look at the world. When you get transferred, all of a sudden there is so much space around you. Even walking is hard because you have learned to only walk on flat concrete surfaces. Walking on gravel or getting into a car, everyone gets ill. I remember just closing my eyes and trying to meditate so that I didn't throw up all over the place from the feeling of so much space.

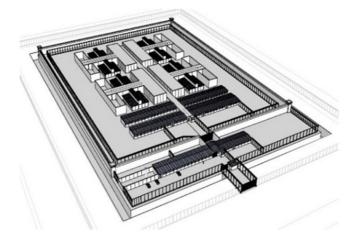


Figure 3. A reference model for the construction of prison units in Brazil

Source: Departamento Penitenciário Nacional (National Penitentiary Department, Depen), Resultados – 2019 (Brasilia: Depen, 2019), p. 6: https://www.gov.br/senappen/pt-br/pt-br/assuntos/noticias/relatorio-de-acoes-do-governo/

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industry (see Figure 3). Facilities are made with materials designed to be 'safe', avoiding potential escapes, at the lowest cost possible. The same economic logic pervades the construction of low-income apartment blocks, public schools and hospitals, which share structural similarities with prisons and are even built by some of the same companies. In our view, this perhaps partially explains the normalisation of the degrading thermal conditions found in prisons, since they are reproduced, albeit on a smaller scale, in other infrastructures directed towards the country's poorest populations. As João H. Costa Vargas explains, geographies associated with the Black population, or what he calls 'occupied zones of dispossession', tend to be the most impoverished. These areas have the highest unemployment rates, are the most vulnerable to environmental degradation, have the highest mortality rates from preventable causes, the lowest access to health, public education and urban infrastructure, and the highest levels of homicide and incarceration. Establishment of the same companies are reproduced.

It is not merely building materials but also layout and design that inflict thermal violence. One ex-inmate, who had experienced repeated transfers between prisons,

²⁶For more on Brazilian modular construction methods, go to https://dbn.eng.br; reference courtesy of Graham Denyer Willis, 'O consenso prisional: Uma análise exploratória da dinâmica política, econômica e socioespacial', lecture given at the Universidade Federal de Alagoas, 4 Sept. 2023.

²⁷Like the low-income housing projects constructed with public funding throughout the country, prisons are usually built away from the city centres, out of sight of those who circulate in the city. There are some similarities between the two types of building. Both are built at low cost, often on the outskirts of the city, where public facilities are scarce, disregarding the individual needs of the people for whom they are intended. Both are large-scale constructions, replicating a 'one-size-fits-all' design in a country whose regions display profound climatic differences. Like modular model prisons, the housing projects also have a pre-fab structure that is usually too small, sometimes too hot, with little privacy and practically no leisure facilities. See Denise Morado Nascimento, 'As políticas habitacionais e as ocupações urbanas: Dissenso na cidade', *Cadernos Metrópole*, 18: 35 (2016), pp. 145–64.

²⁸Vargas, *The Denial of Antiblackness*; quotation from p. 7.

explained that while all the federal facilities are basically the same in terms of their layout, some design elements felt intentionally punitive. In the hot places, he explained, the placement of the window in his cell was such that barely any wind entered to cool it, whereas in the cold places, the window was placed so that the rain and wind came directly inside. 'When it rained, I would have to gather all my things and move to the one part of the cell that didn't get wet. Otherwise, well, if they got wet, I had no chance of staying warm at all. I spent a lot of nights crouched in that one part of the cell that the rain couldn't reach.'

Building design of prisons significantly limits ventilation, which enhances thermal extremes. In a 2022 report from the MNPCT after inspections carried out in prison facilities of the state of Alagoas, observers noted that 'All the cell doors are sheet metal and have a small porthole that faces the corridor. There is no opening in the door or wall for cross-ventilation inside the cells.'²⁹ The issue of the physical structure restricting air circulation was also a feature found in prison units in the state of Paraná, where the MNPCT described both the extreme temperature and the lack of ventilation: 'The corridors and spaces of the Penal Medical Complex are very cold, without proper air circulation'; some cells inspected had 'no cross ventilation or adequate lighting', and the doors were 'iron-plated with small holes at the top, since there are no windows in the cells'.³⁰ Reports from Amazonas, Rio de Janeiro and Rio Grande do Norte also describe environments with very little light and very limited to no ventilation.³¹ Such conditions are associated with the acquisition and spread of infectious skin and respiratory diseases, such as tuberculosis and scabies, which are quite common among prisoners. Poor building design is exacerbated by poor maintenance (see Figures 4–6).

The Ary Franco prison located in the city of Rio de Janeiro provides an even starker example of thermal violence. The prison is composed of five floors, three of which are actually subterranean, and thus completely devoid of air circulation and natural light. According to the 2021 report by the MEPCT/RJ, 'the environment of the unit is extremely humid and stuffy, with very little air circulation in the wings. On the day of the visit, the outside temperature was high and the feeling of heat in the wings we

²⁹MNPCT, *Relatório de inspeção em unidades de privação de liberdade do estado de Alagoas*, Oct. 2022, p. 72: https://mnpctbrasil.files.wordpress.com/2022/10/relatorio-de-inspecao-em-alagoas.pdf.

³⁰MNPCT, Relatório de inspeção: Estabelecimentos penais e socioeducativo do estado do Paraná, Sept. 2022, pp. 50, 154: https://mnpctbrasil.files.wordpress.com/2022/09/relatorio-parana_2022.pdf.

³¹MNPCT, Relatório de inspeção ao estado do Amazonas após massacres prisionais em 2019, April 2020: https://mnpctbrasil.files.wordpress.com/2020/05/relatorio-amazonas-pos-massacres-2019-2.pdf; DP/RJ, Ata de visita: Penitenciária Talavera Bruce, 16 Aug. 2020: https://defensoria.rj. def.br/uploads/arquivos/f72f704484254229b28f80ffac28e018.pdf; Ata de visita: Presídio Evaristo de Moraes, 7 April 2021: https://defensoria.rj.def.br/uploads/arquivos/c0e9edc0acff4188929c2fa7bcca70f2.pdf; Ata de visita: Presídio Evaristo de Moraes, 1 Feb. 2022: https://defensoria.rj.def.br/uploads/arquivos/3092bca256d94128a1e9c8e9aaeff78e.pdf; MEPCT/RJ, Relatório temático: Mulheres, Meninas e Privação de Liberdade no Rio de Janeiro, 2016: https://www.cressrj.org.br/wp-content/uploads/2016/03/Mulheres.pdf; MEPCT/RJ, Relatório Anual 2021, 2021: https://drive.google.com/file/d/1lKISTSQa96mszHCqagJ0Vu1zGUzcn7Yo/view; CEPCT/RN, Relatório de inspeção à cadeia pública Dinorá Simas (Ceará-Mirim/RN), Aug. 2021: https://drive.google.com/file/d/1s-4ytX_Y5SryvhTeL8yM4zAzn5odRugK/view; CEPCT/RN, Relatório de inspeção ao centro de atendimento socioeducativo - CASE Pitimbu (Parnamirim/RN), March 2022: https://drive.google.com/file/d/183KGcJ-AH9AqUpzadd62Li2oFHeM1khD/view.



Figure 4. Poor conditions in a prison in Amazonas: water damage, corrosion, broken sanitary equipment *Source*: MNPCT, *Relatório de inspeção ao estado do Amazonas*, p. 54.



Figure 5. Poor conditions in a prison in Paraná: 1 and 2, damage caused by leaks; 3, loose floor tiles; 4, broken window panes with cans used to block the holes *Source*: MNPCT, *Relatório de inspeção ... do Paraná*, p. 51.

visited was even more extreme. It also had a strong smell that penetrated even through the masks we were wearing. 32

³²MEPCT/RJ, *Relatório Anual 2021*, p. 45. At this time (during the Covid pandemic) Ary Franco was serving as one of the gateways to the state's wider prison system, quarantining newly arrived prisoners. However, with more than 100 per cent overcrowding, and with an underground infrastructure that was

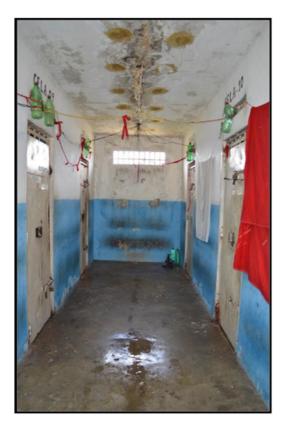


Figure 6. Poor conditions in a prison in Alagoas: effects of leaks; electrical wires exposed *Source*: MNPCT, *Relatório de inspeção ... Alagoas*, p. 20.

One of our interlocutors recalled the sensation of feeling suffocated, describing his cell as so humid and stale that he felt the constant urge to press his face against the bars, just to make sure that he could still breathe. The techniques of inflicting 'suffocation' on those imprisoned in unhealthy environments are enhanced by issues related to the infrastructure of Brazilian prisons. According to the FBSP, in 2022 there was a deficit of 236,133 beds (vacancies) in the prison system.³³ Such extreme overcrowding is the norm, and shows little sign of abating, even with the sharp increase in construction of

completely inadequate for air circulation, it was actually a space that was much more conducive to the proliferation of the virus than it was to containing it. To this day, it is not known for sure how many people died from Covid inside Brazilian prisons, as the figures are believed to be underreported. Such Covid deaths occurred despite all the efforts of families and activists to get the judiciary to grant house arrest, which, in many cases, if not actually denied, did not arrive in time. See further 'Infovírus: Prisões e Pandemias'; Marília de Nardin Budó et al., Gestão da morte nas prisões e a pandemia da Covid 19 (Brasilia: Fundo Brasil de Direitos Humanos, 2023): https://www.academia.edu/114070276/Gest%C3%A3o_da_morte_nas_pris%C3%B5es_e_a_pandemia_da_Covid19; MNPCT, Relatório bienal 2020/2021: A prevenção e o combate à tortura durante a pandemia, May 2022: https://mnpctbrasil.files.wordpress.com/2022/05/relatocc81rio-bienal-2020-2021-versao-final-3.pdf; Grupo de Pesquisa Cidade e Trabalho (Universidade de São Paulo), '(Micro)políticas da vida em tempos de urgência', Dilemas, Reflexões na Pandemia (2020), pp. 1–13.

prisons which has accompanied carceral growth in the last decade.³⁴ Whole cells become sweatboxes. Whole prisons become sweatboxes.

Overcrowding, however, is only one of the factors which affects lack of ventilation and thermal violence. The practice of extreme isolation as a form of punishment can also exacerbate the inhumane conditions. In the reports we analysed, isolation cells in prisons are always mentioned as the worst areas in places that are already incredibly degraded. These spaces in particular can be thought of as the 'underground' of prisons, where deprivation abounds, combining 'the minimum conditions of existence and the maximum destruction' of the person.³⁵ It is no coincidence that in Pernambuco prisons, for example, these cells are called *potes*, or 'pots' or 'jars', by the inmates.³⁶ The term evokes both extreme containment, as prisoners are restricted and sealed alone in a small dark and unventilated area, but the word also references thermal violence – a pot, after all, is used for cooking and boiling.³⁷

The most illustrative example of extreme isolation as punishment, however, is in the federal prisons, which do not face overcrowding problems; on the contrary. And because their structures are supposedly less degraded, they are commonly characterised as more 'humane'. Nonetheless, federal facilities also suffered from problems with ventilation. One of our collaborators, who was imprisoned for two years in a male federal prison in a rural area in the south of the country, told us about the thermal conditions in the cell that housed only him. Among other things, his accounts tell of his extreme loneliness, the loss of feeling in the extremities of his body and his lack of control over even the light switches in his cell. His memories of this period refer to the strong, cold wind that circulated freely through his cell.

Heat

The morning after the escape dawned hot – a Tuesday at the end of a scorching Rio de Janeiro summer. Word among the inmates was that the three prisoners, all of them members of one of Rio's most notorious drug trafficking gangs, had gone out through the front door overnight, shortly after striking a deal with corrupt guards. The diretor had allegedly already been reprimanded by his superiors and had questions to answer. Under his disgruntled supervision, a group of guards turned their efforts to the 'investigation', an elaborate performance intended to shift the blame

³⁴Godoi, *Fluxos em cadeia*. Additionally, we note that discourses about overcrowding produce a perception of prison facilities as in need of expansion, a way of interpreting overcrowding which normalises the ballooning carceral population and obstructs abolitionist conversations. See PaC, *Vozes e dados da tortura em tempos de encarceramento em massa*, [2022]: https://static.poder360.com.br/2023/01/pastoral-carcerariatortura-nos-presidios-18jan-2023.pdf.

³⁵ Mallart, Findas linhas.

³⁶Trevas, 'Mulheres', p. 153.

³⁷Julienne Weegels ('Prison Riots in Nicaragua: Negotiating Co-governance amid Creative Violence and Public Secrecy', *International Criminal Justice Review*, 30: 1 (2019), pp. 61–82) notes a similar style of dark, small and overcrowded cell in Nicaragua called a '*calabozo*' ('dungeon'). As her interlocutor explained it,

There are two types ... 'one is the size of a grown man standing up and stretching his arms, you know, with his arms out he can touch the walls all around. It's dark and you're in there alone.' The other type is a size bigger, 'and they'll fit up to five prisoners in there. It might have a small window, but you're in there 23 hr a day, and there are only two beds.'

onto the unit's prisoners: a deflection. The guards moved methodically from cell to cell. Most contained a single fan, purchased by members of a prisoner's family, and which introduced a light breeze into the stale, humid air.

Guards methodically switched each fan off. The inmates began to sweat, moisture of bodies further heating up the already oppressive environment.

After all of the fans had been turned off and the prisoners left a good while to sit in their damp clothes, the director ordered the next phase of action: the 'procedimento'. In the procedimento – a mass punishment and standard procedure in the wake of security-related events – the incarcerated are first forced to strip naked, then marched from their cells to the prison yard. On this particular morning in the neighbourhood of Bangu, the site of a male prison in an urban area, the mercury was rising, the day glaringly sunny. The sprawling Complexo Penitenciário de Gericinó, a city within a city, is located in the hottest part of the city.

The men were ordered to lie on the concrete floor of the yard, legs spread out wide, arses in the air. The position left little hidden, intimate body parts in the air, exposed to the blazing tropical sun. Procedimento, while framed as a necessary, appropriate step to secure prison spaces and search cells, can last for hours, as was the case in the wake of the escape. The sun moved across the sky. The men were forced to remain still. No water or shade. The sunburns, especially on body parts that had had no regular exposure to direct sunlight, were devastating. Some prisoners also reportedly suffered heat stroke. One of the inmate's lawyers later told us that when legal representatives sought to register complaints about the cruelty of leaving people to 'fry like eggs on the pavement', the director merely replied that he bore no responsibility for the fact that it was a hot day. This was far beyond his responsibility; sunburn 'occurred naturally'. Only God, after all, had the ability to control the temperature.³⁸

Some of the most potent examples of how heat is weaponised came from the Complexo Penitenciário de Gericinó, the largest state prison in Rio de Janeiro, located in the hottest neighbourhood, Bangu, of a city known for its soaring summer temperatures. Popular memes associate Bangu in the summer months with hell, the surface of the sun or an oven. People regularly say that it is so hot that it feels as if each person has their own personal sun, creating the sensation of hundreds of thousands of suns. The extreme heat characteristic of the region makes it undesirable for most Rio residents, and those with the resources to leave relocate to cooler areas. The location of the prison in and of itself already inflicts thermal violence, a fact which is regularly noted in inspections: 'Penitentiaries built with high thermal capacity are not suitable for regions with hot and humid climates (such as the climate of the city of Rio de Janeiro), because these materials tend to act as thermal insulators (i.e., maintain

³⁸This vignette is based on fieldwork carried out by Robb Larkins.

the temperature of the internal environment – in periods of extreme heat, it can be comparable to a greenhouse).³⁹

In addition to being exposed to environments of intense heat, prisoners are regularly denied access to the most basic cooling technology: water. Water deprivation causes thirst and prevents bathing, flushing toilets and the cleaning of communal spaces. All of this increases thermal suffering. Another report from Rio noted: the 'MEPCT/RJ [inspection team] was in the unit during the early evening and the prisoners had already been without access to water for 24 hours, without bathing, without flushing the toilets, and without drinking water. Some of them were menstruating and were especially affected by the situation.'⁴⁰

Drinking water is an even scarcer item. The most common reports indicate that prisoners have no option but to drink water straight from the tap, which is not considered safe in Brazil. This often causes intestinal and skin diseases. In some reports, there are mentions of prison staff bringing their own water to work in order to avoid contamination. In Amazonas, for example, in 2019, the MNPCT discovered that the filters in the drinking fountains were out of date or broken. In several of the units visited, no documents attesting to the quality of the water were identified, 'just as no system for filtering water was found in the collection and storage system' and 'water tanks and cisterns with out-of-date verification seals were found'.⁴¹

In the face of constant supply issues, the only possible solution to mitigate the lack of water, even dirty water, is for prisoners to store it in buckets, bottles, or other types of improvised plastic containers. According to our interlocutors, in some cases cells developed solidarity policies by which this stored water could be made available for the common use of those who shared the same spaces and faced the same deprivation. One interlocutor described her experience with water in a female prison in an urban area in the following way:

As for water, we were always worried about water. We didn't want to have problems. I myself always kept a bucket of 'clean' water and changed it every five days, so as not to die of thirst, right? This is one of the things we need most, water, to take care of ourselves, to drink. All of us were always careful to have a bucket stored so that we wouldn't run out. But conditions were tough.

According to another interlocutor, who was held in the federal male prison in a rural part of Mossoro, in the hottest months the water came out of the taps scalding hot, making it impossible to drink or bathe with. He recounted his strategy to try and cool the water:

³⁹Lucas Cesar Osório de Castro, 'Relação entre eventos extremos de temperatura e as taxas de mortalidade das regiões metropolitanas do Rio de Janeiro e de São Paulo: Estudos de caso dos anos de 2010, 2012 e 2016', unpubl. Bachelor's thesis, UFRJ, 2019.

⁴⁰MEPCT/RJ, Relatório temático: Mulheres, p. 58. We note that water outages and the lack of water, especially in the summer months, are common to nearly all favelas in Rio de Janeiro and beyond. For this reason, perhaps, the fact that prisons regularly lack access has been normalised.

⁴¹MNPCT, Relatório de inspeção ao estado do Amazonas, pp. 51, 52.



Figure 7. The few air-conditioned spaces in prisons are designated for religious events and education *Source*: 'Seris [*Secretaria de Ressocialização e Inclusão Social*] promove ações de acesso à religião para os reeducandos em AL', *Tribuna do Sertão*, 15 March 2023: https://tribunadosertao.com.br/noticias/2023/03/15/341697-seris-promove-acoes-de-acesso-religiao-para-os-reeducandos-em-al.

If you had one plastic water bottle, you were a rich man. If you had two you were a very, very rich man. I never met anyone who had more than two. In the summer, I would take the hot water from the tap and fill up my bottle. Then I would take one of my socks, the spare pair that I was not wearing, and get it wet and put the bottle inside of it. And then I would set the bottle in the window so that the cooler air could maybe cool it down.

Beyond simply housing prisoners in extreme heat and depriving them of water with which to cool down, we also heard and read about the more direct weaponisation of heat and sunlight as a form of punishment. While the most extreme example of this was recounted in the vignette above, where prisoners were forced to lie naked for hours in the hot summer sun, we also heard about the management leaving prisoners in the yard for hours with no access to shade as a form of punishment. In other cases, the designated visiting areas were located in the direct sun, meaning that family members, including babies and children, had to endure the heat in order to visit their relatives.

Heat as one of the facets of thermal violence sheds light on how the manipulation of prison infrastructures also expresses the hierarchies present in prison spaces, as Starosielski points out. If extremes of temperature are the rule in cells, yards and isolation cells, it is necessary to ask about which spaces *are* climate controlled. In the case of the Igarassu prison, for example, cold air was the privilege of the rooms occupied by the prison authorities or used for church services (see Figure 7). The ambience of the environment for worshippers provided an even starker contrast – the theological school in the Igarassu prison was a clean, cool space, tiled in white ceramic. These contrasts also allow us to ascertain how heat is not just a natural consequence of Brazil's tropical climate but can be understood as a way of demarcating privilege, position and territory, whether through infrastructure or more spectacular events.

The idea that the countless forms of suffering, including thermal suffering, experienced by incarcerated people are somehow 'deserved' may be related to a moral association between suffering and redemption.⁴² On the one hand, suffering is seen as having the potential to transform and reform criminals. On the other hand, in the case of those deemed incorrigible, their suffering does not deserve compassion.

The same logic applies to thinking about access to or deprivation of water. Far from being understood as an essential item for survival, water is seen as superfluous, a luxury, and its use can therefore be restricted. One interlocutor said that in some cell blocks of the prison where her husband was held, there was access to water for only two hours per day, in the early morning. Another cell block, however, housing prisoners with favourable relations with the prison management, had uninterrupted access to water. Access to water or to cooling technologies, or their denial, are used strategically to hierarchise prisoners, punishing some and privileging others, according to what is useful to prison management.

Another strategy to deal with oppressive 'stuffiness', especially common in hot regions of the country, is the use of fans in the cells, which are not provided by the prison itself but are instead purchased by inmates' families and delivered on visiting days. ⁴³ But even this attempt at collective cooling was frequently thwarted by prison authorities. One of the collaborators in this research, the partner of a prisoner, told us that it was not uncommon for the power in the prison unit where her partner was being held to be turned off at night. As well as being left in complete darkness, prisoners were unable to use their fans to aid sleep; other collaborators also told us about power cuts being used as a form of discipline.

In some cases, not only was power cut but fans were also confiscated, with prison staff citing sudden 'security concerns'. 44 As with water, access to cooling technologies appears to be viewed by prison officials not as health related but as an issue related to comfort. Fans are presented not as essential for survival but as a privilege that is subject to revocation at whim of the prison authorities and whose removal is a tool to mete out punishment. For example, a newspaper report describes inmates in a Rio de Grande do Norte prison as losing their right to television, electro-domestic appliances and fans (Figure 8). 45 Indeed, it is typical to find fans cited in lists of objects confiscated during cell inspections, along with cell phones, weapons and drugs. Thus, access to a fan is contingent on prison power dynamics.

⁴²Carly Barboza Machado, 'Pentecostalismo e o sofrimento do (ex-)bandido: Testemunhos, mediações, modos de subjetivação e projetos de cidadania nas periferias', *Horizontes Antropológicos*, 20: 42 (2014), pp. 153–80; here p. 157.

⁴³In some Texas prisons, the prison shop actually sells fans to prisoners at highly inflated and inaccessible prices.

⁴⁴See also Alana Barros Santos' analysis of the confusion created by prison staff regarding inconsistencies in information about permitted and prohibited objects in prison: 'Redes de solidariedade e práticas de resistência através de interações online e offline entre familiares de pessoas encarceradas', *Plural*, 30: 1 (2023), pp. 108–27.

⁴⁵Aliny Gama, 'Detentos de presídio no RN ganham "castigo" e perdem direito a TV e ventilador', Canal UOL, 26 July 2012: https://noticias.uol.com.br/cotidiano/ultimas-noticias/2016/07/26/detentos-de-presidio-no-rn-ganham-castigo-e-perdem-direito-a-tv-e-ventilador.htm.



Figure 8. Fans confiscated from prisoners in Paranamirim (RN) *Source*: Gama, 'Detentos de presídio no RN'.

Another way of preventing the use of fans can be to build prisons in such a way as to deny their possible use, as another interlocutor reported of the facility where he had been held: 'When I was there, there was no such thing as a fan, because they [the prison authorities] claimed that it [the prison] had been built without a system that could allow the use of a fan.' By building infrastructures in which prisoners have no access to sockets or switches in their cells, as is the case in federal prisons, prisoners completely lose control over the most basic items. One interlocutor, whom we call Joe, explained this in more detail:

In the Federal, there are absolutely no fans. Not even a plug to plug them in to. But in the State, yes. Getting the fans is not as hard as having a good electrical connection to power them. Maybe you have a plug in your cell but probably not. The prisoners have to arrange their own connection. It's a crazy mess of electrical wires, worse than anything you have ever seen in the favela. Wires hang in bunches so low that they are right above your head or in your face. But there is always a prisoner who did a course, that is an electrician, and so we would get those guys to fix the connection.

Cold

During my years of imprisonment in many different places, in the state and the federal system, the cold in Catanduvas was maybe the worst. In Catanduvas, I suffered. It was just so cold. I am a carioca [inhabitant of Rio de Janeiro]. Built for the heat. I am used to how hot it is. I even like the heat. But the cold. Not the cold. At night, a freezing wind would blow through the cell. Sometimes it would blow all day. To sleep, I would have to jump up and down. Exercising my body and moving

enough to generate some heat. Just enough so that I could fall asleep. Imagine the whole night. Waking up constantly, exhausted, getting up to jump up and down to get warm. It was so cold that I went to great lengths so I wouldn't lose my hands or feet. First, I would take toilet paper and wrap it around my feet and especially between my toes because if you sweat, and then freeze, it will make you colder. Then I would put shorts over each foot and then a sock over all of it. I made boots! I would do the same thing with my hands using my spare t-shirts. I would wrap my whole head in shirts too, leaving only my eyes exposed. 46

Although extreme heat is the most common thermal sensation associated with prisons in Brazil, extreme cold also presents a significant challenge. Low temperatures and icy wind were frequently mentioned by interlocutors and appeared in the reports, especially those focused on prisons located in the south, the coldest region of the country. The prevalence of cold as a form of thermal violence is no doubt also related to the infrastructural characteristics of the prisons, which conduct the outside temperature due to the large amount of iron and concrete. Prisoners furthermore noted the lack of access to adequate clothing, to water at the appropriate temperature for baths/showers and, in the case of federal prisons specifically, the use of isolation cells preventing any collective strategy to mitigate the cold. Joe, for example, told us: 'We had only a sheet most of the time. Even in the coldest months.' His wife, who was participating in the conversation and sharing her own experiences and memories, chimed in to say that after some of the prisoners started losing sensation in their hands and feet (frostbite) due to the extreme cold, their lawyers wrote to request the purchase of appropriate winter clothing. 'Of course the petition was denied', she explained, shaking her head. 'Security, they said.'

A seemingly standardised failure to provide basic equipment to cope with extremes of temperature was similarly reflected in the reports. Prisoners in Paraná reported a lack of access to warm clothing, blankets, mattresses and hot showers. According to the detainees there were rats, no beds or mattresses and much less blankets for cold days.⁴⁷ Even in regions known for their heat, such as Alagoas, there are accounts of the cold and the lack of blankets in the winter months.

Exposure to the extreme cold was not only about thermal violence but also had further health implications for prisoners. Joe explained that 'In the winter, people who didn't take care, their skin would peel and break. The corners of their mouths, the creases of their noses [he gestures to his own face], would get sores. The sores would get infected. They would just be covered with sores.' One of our female interlocutors also described the impact of the punishing cold in the detention centre where she was held for seven years:

I usually get sick from the change in temperature. The cell blocks get so cold, you know, the bed is concrete, you know. So it's very bad. And there's nothing, we don't even have access to the right clothes. So it was a very difficult time. I think that today what I'm feeling in my joints has to do with the time I spent there, and we start to feel the consequences later.

⁴⁶This vignette is based on an interview with Joe conducted by Robb Larkins.

⁴⁷MNPCT, Relatório de inspeção ... do Paraná, p. 84.

Thermal violence is inflicted not only on prisoners but also on their family members. The wife of an ex-federal inmate described her own experience of being subjected to weaponised cold while visiting her husband in Catanduvas:

My husband says that I was kidnapped, so I guess we can call it that. It was a cold, cold morning and we were queuing for a visit, just a visit through the glass since it was during the time that face-to-face visits were prohibited. So we weren't going to be in close contact with our husbands, just putting our hands against theirs on the glass, you know? The guards pulled me and another woman out of the queue. They accused us of carrying drugs inside of our bodies and took us away, escoltadas [escorted], their guns pointing right at us the whole time. They made us strip and stand on the concrete. I was cold, so cold. Shaking. And they left us in that cold to wait. Then they searched our bodies, our vaginas and anuses various times. I was shaking. Really, I trembled for months after that. I would just shake all the time. I could barely get on the plane to go home. I was terrified to return to visit.

These accounts well describe how the cold is used to enhance the pain of the experience of imprisonment, and how thermal violence can be turned against those who associate with prisoners. The above example of the procedimento, during which prisoners were left naked under the scorching sun, or the accounts of wives left unclothed in the cold to have their bodies checked by security agents, demonstrate how temperature is intertwined with forms of punishment and humiliation and can work alongside sexualised forms of domination. Thermal violence is piled on top of other rights violations. The cold and the heat, together with situations of vulnerability and isolation, result in long-lasting physical and mental illness that extends beyond the prison sentence.48

As Starosielski also points out, thermal violence is not restricted to temporary exposure but is also related to the long-term consequences of the manipulation of bodily capacities to accumulate and mediate heat.⁴⁹ Prolonged suffering is triggered by constant exposure to extremes of heat, cold and humidity, and to lack of hygiene and ventilation. Effects on both physical and mental health continue to be experienced even by those who are no longer inside prisons, as reported by several of our interlocutors. Besides persistent joint pain and respiratory diseases, we also heard about anxiety and depression. One interlocutor even mentioned a loss of sensitivity to the taste of food. After her release, she said, she couldn't tell if what she was eating was cold or even rotten. Such sensations accompany the ex-prisoners even after they have moved beyond the prison's walls and are preserved in their bodily experiences.50

 $^{^{48}}$ A clear example of this is demonstrated by Fábio Mallart, in his research on the São Paulo prison archipelago, which addressed, among other things, the widespread use of psychotropic drugs as a form of control and containment in prisons. Many psychotropic drugs tend to worsen the thermal sensitivity of their users: Mallart, Findas linhas.

⁴⁹Starosielski, 'Thermal Violence', p. 3.

⁵⁰Other researchers have also pointed out the physical and mental illnesses developed by ex-prisoners due to the conditions they faced while were imprisoned. See Calvin John Smiley, Purgatory Citizenship: Reentry,

Nonetheless, despite the forms of thermal violence we have detailed here, the formerly incarcerated people who shared their experiences with us also described a rich array of creative strategies to survive, many of which we have described above. These attempts to exert thermal control, to resist – albeit in a limited way – included collective strategies of solidarity such as sharing water, cleaning supplies or fans provided by family members, as well as individual practices of jumping up and down to stay warm or holding one's face up to the bars to try to breathe. Solidarity also entailed teaching others strategies to mitigate everyday suffering. In these small ways, despite the overall climate of thermal violence that shapes the quotidian experience of imprisonment, people continue to find ways to survive.

Conclusion

Thermal conditions are dictated by where the prison is constructed, the types of building materials used, the presence or lack of ventilation and the provision (or not) of appropriate mitigations like fans, blankets and water. Making the bodies of vulnerable individuals more susceptible to extreme temperatures becomes a tool for inflicting suffering on a population already largely stripped of its autonomy to cope. This constitutes a form of thermal violence, which, despite the pervasive manner in which it permeates all facets of prison life, goes largely unrecognised as violence and is rarely called out as such. The reasons for this, we believe, are multi-faceted. On the one hand, prison is viewed as an extension of other thermally marginal spaces that comprise the country's mostly Black, low-income suburbs, peripheries and favelas. Every summer residents in heat islands suffer from raised temperatures without access to stable electrical connections with which to power fans or air conditioners. They often face water shortages which limit the ability to cool down. They lack the resources to purchase bottled or filtered water to drink. In the rainy season, floods and landslides sweep away flimsy housing. Dirty water accumulates. Despite the clear pattern by which such 'natural disasters' impact mostly low-income people, and Black Brazilians, these events are dismissed by society at large as unfortunate isolated incidents, not as intertwined with thermal violence. And at the end of the day, the prison leadership – who are responsible for either directly using sun and extremes of temperature to punish or, at the very least, for failing to provide people with adequate shelter and the mitigation needed to maintain their health - can deny responsibility, blaming natural forces. As the diretor in Rio reportedly said, how is he to control the sun in the summer? In summary, we argue that thermal violence must be considered alongside other everyday forms of violence and humiliation common to Brazilian prisons. Following the lead of Alex Colucci, Daniel Vecellio and Michael Allen, we have in our treatment of the different facets of thermal violence addressed here avoided a binary viewpoint, which separates more visibly direct practices - such as punishment under the sun and the confiscation of fans - from those related to the structural conditions of prisons - such as the location of prison units and the absence of cross ventilation. After all, built structures are not neutral. Rather, 'carceral arrangements have punitive results and reflect penal

Race, and Abolition (Oakland, CA: University of California Press, 2023), p. 97; Julienne Weegels, 'Carceral Citizenship in Post-Protest Nicaragua: Political Imprisonment and Civil Death', European Review of Latin American and Caribbean Studies, 23: 116 (2023), p. 177.

philosophies.'51 They are 'spaces [that] are designed to conceal, obscure, and otherwise obfuscate punitive and violent processes that happen within them through both material and abstract processes of enclosure. 52 By placing the issue of climate control alongside the prison issue, our intention is to echo critical studies on the prison system, which have already pointed out that there is no possible reform for a structure that is inherently and inevitably designed to produce various forms of violence, including thermal violence.

As we have demonstrated, climate extremes in prison fail to be mitigated in such a way as to make life liveable, in the same way that they are in low-income, racially marked settings outside of prisons. What we see across the prisons, then, is a way in which climate is allowed to dominate, where minimal effort and resources are given to providing a modicum of control. Of course, the fundamental lack of climate control is a form of control itself - since the failure to provide tools to cope with the heat reflects prison officials' domination over the bodies of the incarcerated. Just as the prison regime dictates when a prisoner eats, exercises, or feels the sunlight on his or her face, so too does it decide if the prisoner sweats or freezes.

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Violencia térmica: la política de control climático en las prisiones de Brasil

Este artículo explora la intersección entre las geografías carcelarias y la (in)justicia climática en Brasil, país con una de las mayores poblaciones carcelarias del mundo. A partir de trabajo de campo etnográfico, entrevistas y un análisis de informes de organizaciones de monitoreo que examinan centros penitenciarios en todo el país, preguntamos cómo las condiciones climáticas forman parte de un proyecto nacional de infligir sufrimiento dentro del sistema penitenciario. Los materiales de construcción no aislantes, la falta y el exceso de agua y ventilación, así como el hacinamiento, exacerban la exposición al calor abrasador o al frío gélido, sometiendo los cuerpos de los presos a temperaturas extremas. Argumentamos que esto constituye una forma de violencia térmica, en la que el calor y el frío se utilizan como armas para dañar y castigar.

Palabras clave: prisión; violencia; calor; frío; Brasil; control térmico

⁵¹Colucci et al., 'Thermal (In)equity', p. 645.

⁵²Ibid., p. 647.

Violência térmica: a política de controle climático nas prisões do Brasil

Este artigo explora a interseção das geografias carcerárias e da (in)justiça climática no Brasil, onde se encontra uma das maiores populações carcerárias do mundo. Com base em trabalho de campo etnográfico, entrevistas e uma análise de relatórios de organizações de monitoramento que examinam instalações em todo o país, perguntamos como as condições térmicas fazem parte de um projeto nacional de infligir sofrimento dentro do sistema prisional. Os materiais de construção condutivos, a falta e o excesso de água e ventilação, bem como a superlotação, exacerbam a exposição ao calor escaldante ou ao frio de gelar os ossos, submetendo os corpos dos prisioneiros a temperaturas extremas. Argumentamos que isso constitui uma forma de violência térmica, na qual o calor e o frio são usados como armas para prejudicar e punir.

Palavras-chave: prisão; violência; calor; frio; Brasil; controle térmico

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