



Article

Characterisation of Contemporary Slavery through the Analysis of Accommodation Conditions

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Abstract: Slave labour or work in conditions analogous to slavery continues on all continents and sometimes tends to be mistaken for “simple” violations of labour laws. Therefore, this work aims to identify parameters that allow distinguishing between situations of non-compliance with labour legislation and modern rural slavery in Brazil through the analysis of accommodation conditions. To achieve this objective, a bibliographic research was developed in six databases on sanitary, accommodation and clothing issues of enslaved workers in the 19th century in Brazil. The resulting data were compared with data from a sample of 392 proven cases of neoslavery detected between 2007 and 2017 in Brazil. The analysis focused on the general conditions of the physical structures necessary to protect workers against bad weather, animal attacks, violence, sanitary conditions to support physiological and asepsis needs, as well as the clothing provided and used. Similarities were found in the accommodation conditions between enslaved and neoenlaved workers in Brazil between the 19th and 21st centuries. The availability of sanitary conditions (toilets), rest (bedrooms/dormitories), and the general housing structure are very similar. Future research may point towards identifying other parameters and developing a tool to help authorities unequivocally identify neoslavery situations.

Keywords: neoslavery; modern slavery; forced labour; housing; occupational safety and health (OSH); human rights



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1. Introduction

According to the International Labour Organization (ILO) and also some independent authors, currently, work carried out in conditions similar to slavery persists, being a reality on all continents and in different economic sectors (Campbell 2008; OIT 2017; Teh et al. 2019; Campbell 2008; ILO 2017; Stringer and Michailova 2018). An estimated 40.3 million people worldwide were subjected to contemporary slavery in 2016 (OIT 2017). The largest concentration of this contingent occurs in undeveloped countries (Dando et al. 2016; OIT 2017; PioVesan 2006; Ramos Filho 2008; Soares 2017).

All recognised national governments prohibit slave labour through national legislation and international agreements to which most countries are signatories (Gonçalves et al. 2020; Lourenço et al. 2019; Machura et al. 2019). In Brazil, one of the last countries to abolish slavery (Brasil 1888; Monteiro 2012), legislation to combat modern slavery is based on the ILO Declaration on Fundamental Principles and Rights at Work and its follow-up (ILO 1998). This legislation presents four factors characterising conditions similar to slavery (Brasil 2003). Among them, the submission of people to “degrading working conditions” can be highlighted, which concerns the minimum working conditions from the perspective of OSH (Occupational Safety and Health) standards (Brasil 2003). This characterisation includes the fundamental physical infrastructures for basic human needs, such as accommodation conditions (Brasil 2005).

However, as the items characterising contemporary slavery as “degrading working conditions” are also included in the OSH standards, such criminal situations tend to be reduced to simple violations of labour regulations. With this bias of characterisation, such cases move from the criminal to the administrative context, punishable only by fines imposed by the body inspecting working conditions (Ramos Filho 2008). Thus, the criminal punishment for users of slave-like labour tends to be softened (Gonçalves et al. 2020; Lourenço et al. 2019; Machura et al. 2019; Ramos Filho 2008) despite these users subjecting workers to very harsh working conditions much worse than those legally permitted (Garreto et al. 2021a, 2021b; Ramos Filho 2008).

Thus, it was hypothesised that it is possible to distinguish the two situations (criminal context and administrative context) by comparing them with the working conditions of enslaved people in the 19th century.

Contrary to what happens today, until the 19th century, enslaved workers were the primary source of labour and productive energy in many countries, including Brazil. The use of slave labour in all major agricultural export products had a strategic economic function and was difficult to replace at the time (Assunção 2015; Pinsky 1988; Schwartz 1988).

Until 1888, when slavery was abolished in Brazil, captive workers were labour (Albuquerque 2006), but at the same time a patrimonial asset resulting from a capital investment that would be amortised and generate profits for its owner (Pinsky 1988). The economic rationale for slave labour meant that captives were treated similarly to equipment, tools, animals, and everything else necessary to the profitability of agricultural production. It was necessary to offer the least and demand the most from these workers to ensure the greatest return on investment (Assunção 2015; Pinsky 1988; Schwartz 1988). The payback time on capital investment with the acquisition of enslaved people was described in the first half of the 19th century as up to 5 years (Assunção 2015; Magalhães 1858; Pinsky 1988; Schwartz 1988).

Poor working conditions, insufficient food, and in particular poor-quality and very precarious accommodation conditions were usual to save costs (Assunção 2015; do Alferes and Werneck 1878; Schwartz 1988). As a consequence of these working and living conditions, the health of the enslaved population was precarious, and mortality rates were much higher than those observed in the free population (Assunção 2015; Eugenio 2015; Lima 2015; Rodrigues 2009; Taunay 1839).

Precarious workers, especially those subjected to conditions similar to slavery by Brazilian inspection teams, also tend to have deplorable accommodation conditions (Leão et al. 2021; Raimundo and do Vale 2021; Sakamoto et al. 2020). This is one of the main degrading conditions in the characterisation of modern slavery in Brazil. In these accommodations, usually improvised, there is a lack of physical security, sanitary conditions, and weather protection (Brasil 2015; Emprego 2011; Théry et al. 2012). From an OSH perspective, this work compared the accommodation conditions of 21st-century neoslavery with those of 19th-century classical slavery, aiming to establish technical and scientific parameters that help identify neoslavery situations.

It was expected to establish parameters for more objective identification of situations similar to slavery, which would contribute to the effectiveness of the inspection actions and increase the possibilities for criminal punishment in situations related to people's slavery.

Thus, this work aimed to establish technical and scientific parameters for identifying situations of modern slavery by comparing the accommodation conditions of 21st-century neoslaves with those of 19th-century classically enslaved people.

2. Materials and Methods

The methodology used to compare slavery and neoslavery focused on collecting and analysing data from two distinct periods. For the classical slavery of the 19th century, articles and books were selected from electronic databases (Science Direct, SCOPUS, Web of Science, Criminal Justice, EBSCO, Business Source Complete) from 2014. The same keyword combinations were used in all databases (slavery and work), and no language

filter was used. Brazilian sources from the period when slavery was legal in that country were also searched and accepted.

For the analysis of classical slavery, a bibliographic search was carried out in electronic databases (Science Direct, Scopus, Web of Science, Criminal Justice, EBSCO, and Business Source Complete). Relevant articles were selected from titles and abstracts. At this stage, works that did not describe the housing conditions of Brazilian slaves were excluded. For the final record selection, the used inclusion criteria were: (1) direct description of the topic, (2) focus on Brazilian slavery in the 19th century, and (3) the source being recognised as reliable. Only articles that allowed the extraction of relevant information within a standardised form (country region, climate and housing conditions) were included.

In the second phase of information search, the bibliographic references of previously selected records were analysed. In this second search, several theses, dissertations, and, fundamentally, books and rare books (original publications dating from the 18th and 19th centuries) were found.

For contemporary work in conditions similar to slavery, reports from the Brazilian Inspection to Combat Slave Labour in this 21st century were examined. Were also studied the information extracted from selected articles related to the country's different regions, accommodation, and clothing conditions.

For neoslave labour, the sample size was calculated from the estimate of 369,000 people enslaved in Brazil in 2018 (Foundation 2018). Confidence was set at 95%, and the margin of error, at 4.95%. The sample size (n) was calculated from the expression:

$$n = \frac{NZ^2p(1-p)}{(N-1)e^2 + Z^2p(1-p)} \quad (1)$$

where:

n : sample size to be calculated;

N : population size;

Z : confidence level chosen, expressed as standard deviations;

p : proportion expected to be found;

e : maximum tolerated margin of error.

The sample used for the analysis of contemporary slavery came from the Inspection Reports on Combating Slave Labour in Rural Activities produced by the Inspection Division for the Eradication of Slave Labour (DETRAE) of the Brazilian Government. From 1545 inspections of this type in Brazil between 2007 and 2017 (Brasil 2016), 42 reports produced in different Brazilian regions (Trabalho 2017) were randomly selected. All featured work in conditions analogous to slavery.

The 42 reports were prepared by 113 inspectors, organised in teams with up to 6 members in each diligence. They covered 648 workers, of whom 392 worked under conditions characterised as analogous to slavery for "exhaustive work" and/or "bad working conditions" according to Brazilian legal classification.

Other studies based on Inspection Reports from Brazilian authorities (Brasil 2015, 2016) were used for control purposes by comparing results.

Finally, the conditions offered to the enslaved were compared with those provided to the neoenslaved workers.

3. Results

3.1. Nineteenth Century

It is necessary to consider the climatic differences among the Brazilian regions to assess clothing and accommodation conditions. The predominance of exposure is to heat in the northeastern states (closest to the Equator) (Assunção 2015; Gayozo 1818; Magalhães 1858; Marques 1870; Prazeres 1891; Schwartz 1988; Vieira Junior and Martins 2015; Viveiros 1954) and to mixed heat and cold in the southeast region (do Alferes and Werneck 1878; Eugenio 2015). However, it was found that the supply of clothing in all regions was reduced. These

clothing shortage conditions were particularly severe in the southern regions because of the more significant variation in weather conditions (Figure 1).

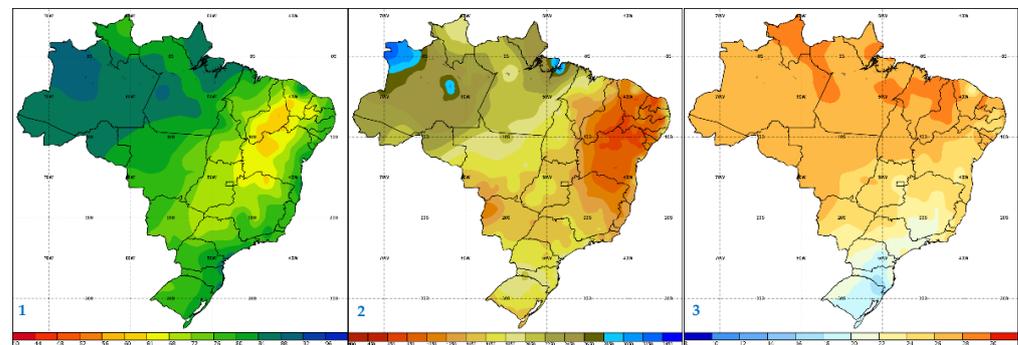


Figure 1. Brazilian climatological data, period 1981–2010: map 1 (annual average relative humidity), map 2 (annual accumulated rainfall), and map 3 (annual average temperature) (INMET 2011).

Poor accommodation and clothing conditions are evident in Table 1. They were closely related to the exposure and dissemination of biological contaminants among the slave population on Brazilian farms (Garreto et al. 2019), both because of their poor quality and because of the precarious sanitary conditions in which the enslaved population lived.

Table 1. Accommodation and clothing conditions—19th century.

Ref.	Region	Accommodation Conditions	Clothing Conditions
(Albuquerque 2006)	Southeast of Brazil	(1)	(2)
(Assunção 2015)	Maranhão	—	(2)
(Borges 2021)	All of Brazil	(1)	—
(de Oliveira 2018)	All of Brazil	(1)	—
(Dias et al. 2018)	Bahia	(1)	—
(do Alferes and Werneck 1878)	Southeast of Brazil	—	(2)
(Rugendas 1834)	All of Brazil	(1)	—
(Eugenio 2015)	Minas Gerais	—	(2)
(Gayozo 1818)	Maranhão	(1)	—
(Imbert 1839)	All of Brazil	(1)	(2)
(Lara 2010)	All of Brazil	—	(2)
(Lima 2015)	São Paulo	—	(2)
(Magalhães 1858)	Maranhão	—	(2)
(Marques 1870)	Maranhão	—	(2)
(Pinsky 1988)	All of Brazil	(1)	(2)
(Prazeres 1891)	Maranhão	—	—
(Rodrigues 2010)	All of Brazil	—	(2)
(Schwartz 1988)	Bahia	(1)	(2)
(Taunay 1839)	All of Brazil	(1)	(2)
(Viveiros 1954)	Maranhão	—	(2)
(Wood 2014)	Rio de Janeiro	—	(2)

(1) Wooden and clay shack covered with leaves or tiles; (2) insufficient thermal protection and hygiene.

It was with a body and clothes impregnated with sweat and remnants of other bodily fluids, and often also with chemical contaminants such as dust and fumes, that the enslaved worker would retire to sleep until the next day's work. Their garments used to be washed no more than once a week (Taunay 1839). They slept in the clothes they wore during the day, day after day, on pallets or mats. The dormitories were shacks, large or small, usually made of wood and clay, with walls closed with raw clay and covered with leaves. The shacks, known as "senzalas", had no windows, only small openings near the leaf roof that ensured air circulation for their many inhabitants (Pinsky 1988; Schwartz 1988). They

used to be the worst structures on farms, the least resistant. However, even then, it was customary to lock the door. Couples used to have the right to live in a small shack (Figure 2) (Rugendas 1835) built similarly, a kind of mini senzala (slave quarters) (Schwartz 1988).



Figure 2. Accommodation and clothing of 19th-century enslaved people (Rugendas 1835).

3.2. Twenty-First Century

In the 21st century, accommodation and clothing conditions were evaluated through individual and detailed analysis of the sample collected through DETRAE reports.

Regarding the accommodation conditions of identified neoslaves (Table 2), it was found that only 5.36% had access to functioning sanitary facilities. The remaining 94.64% did not have access to this type of facility with the minimum conditions of functionality (by “minimum conditions” is understood the availability of water and sanitary equipment). These workers performed their physiological needs in the accommodation surroundings, mainly among vegetation. The same percentage of the sample did not have access to bath structures, so baths took place outdoors in an improvised way.

Table 2. Typical housing risks.

Risk Type *	Source	Risk	Possible Effects
B	Infr.	Absence or inadequacy of sanitary facilities	constipation; renal disorder; infection; parasitic disease
F	Infr.	No bed or hammock provided	tiredness; stress; decreased immunity; hypothermia
M	Infr.	Accommodation without guarantee of personal safety	tiredness; stress; decreased immunity; lesions; death
F	Infr.	Accommodation without protection against adverse weather conditions (rain, cold, wind)	tiredness; stress; respiratory problems; hypothermia; death
Q	Infr.	Unsafe fuel stored inside the accommodation	burns; asphyxia; death
Q	Infr.	Unsafe storage of pesticides inside the accommodation	asphyxia; intoxication; death

* B—biological; F—physical; M—mechanical/accident; Q—chemical; Infr.—infrastructure (Tranter 2020).

For sleep, most of the sample used old and filthy foam mattresses placed directly on the floor or improvised beds with tree branches or in hammocks they owned. Of the sample, 93.88% did not receive a bed or a hammock. Of these neoslave workers, a considerable portion (18.37%) slept directly on the floor on clothes or pieces of cardboard. Only 6.12% received a bed or hammock from the contractors.

It is necessary to consider the climatic differences between the various regions of Brazil to assess the adequacy of clothing and accommodation conditions. In the northeastern states (closer to the equator), heat exposure is predominant (Assunção 2015; Gayozo 2018;

Magalhães 1858; Marques 1870; Prazeres 1891; Schwartz 1988; Vieira Junior and Martins 2015; Viveiros 1954), and in the southeastern region, there is mixed exposure to heat and cold (do Alferes and Werneck 1878; Eugenio 2015). However, there was a reduced supply of clothing in all regions. These clothing shortage conditions were particularly severe in the southern regions because of the more significant variation in weather conditions (Figure 2) (INMET 2011).

Regarding the general accommodation structures, 64.54% of the enslaved workers had to sleep without conditions to guarantee their safety and physical integrity. Usually, workers' houses were canvas tents with tree branches structures assembled by themselves (Table 3). Even when the accommodation was in a masonry structure, it was common to have no doors or windows. In addition, 82.4% of the accommodations did not have adequate protection against bad weather (Table 3).

Table 3. Conditions of the accommodations' physical structure.

Physical Structure—Accommodation	Yes	No
Ensured physical security	35.46%	64.54%
Protected against weather	17.60%	82.40%

No supply of work clothes in which to perform tasks was identified in the entire sample. This required enslaved workers to wear their own clothes, which were usually inappropriate or insufficient in quantity for the weather conditions.

4. Discussion

The housing conditions found in the study sample did not present significant variations between the various regions of Brazil. On the contrary, these results were in agreement with those described by other authors (Silva 2009; Brasil 2015; Soares 2017; Sakamoto et al. 2020). This shows a homogenisation in the working conditions of rural workers in conditions similar to slavery in all regions of Brazil.

4.1. Clothing and Accommodation of Enslaved People in the 19th Century

4.1.1. Intensified Exposure in the Accommodations

Because of the intense heat and humidity in the main areas that used slave labour (the Brazilian coast), enslaved workers were always wet from sweat or rain, since the weather was not considered an obstacle to daily tasks. Exposure to contaminants from other activities, such as liquids and aerosols (dust, plant fibres, gases, and fumes), also generally occurred without any physical or administrative protection measures being taken (Imbert 1839; Taunay 1839).

The poor ventilation of the slave quarters did not facilitate the dispersion of contaminants impregnated in clothes and bodies. Because of the slave owners' habit of keeping their door locked at night to make escape difficult, the captives ended up dealing with their physiological needs inside the slave quarters. For this reason, the quarters were commonly described as smelly and filthy (Schwartz 1988), being a severe biological risk factor. The slave quarters were a factor in the spread of chemical and biological contaminants and, consequently, diseases among their inhabitants.

In addition to being wet with sweat and loaded with chemical and biological contaminants, clothes were scarce and insufficient to protect against weather variations, especially drops in temperature. These clothes of coarse and cheap fabric were distributed once or twice a year in quantities that were always insufficient to meet needs. In the coffee farms of southeastern Brazil, with a cold climate and great demand for thermal protection, slave owners annually provided only three shirts, three pairs of pants and coats, a hat, and two blankets (Albuquerque 2006). In regions with a warmer climate, the amount of clothing provided was significantly lower. In Maranhão, very little clothing was provided to enslaved people. They usually wore a small thong (Assunção 2015; Magalhães 1858).

They could also wear shorts below the knee, without a shirt, as was common in Bahia (Schwartz 1988).

On farms with more technical management, these subjects had to change their dirty clothes to clean ones on Sundays once a week (do Alferes and Werneck 1878). However, no evidence was found that this practice was widespread among farmers. There was consistency among 19th-century authors about the inadequacy of clothing supply. Thus, it is likely that this undersupply was a common practice.

The reduced number of available pieces of clothing led to the continued use of what clothing was available, making proper hygiene unfeasible. This factor was added to the mechanical and chemical wear suffered by clothing due to the heavy work routines in the fields and mills. These factors further exposed enslaved people to the elements, as the clothing provided did not last long enough. In the months before new clothes were delivered, the slaves walked around dressed in the leftover rags (Pinsky 1988).

4.1.2. Thermal Protection

The most common routine among plantation slaves consisted of work considered heavy (Garreto et al. 2021b) by the current criteria of ISO 7243:2017 (ISO 2017) in hot and humid climates (Nimer 1989; Taunay 1839). In these climatic and metabolic conditions, the scarcity of clothing became a lesser evil. It is known that worker clothing influences thermal stress, and its use implies an increase in the correction values for the WBGT index, depending on the type of clothing (Bernard et al. 2005; ISO 2017; Rowlinson et al. 2014).

However, when performing in colder weather conditions or at night under lower temperatures, these individuals were thermally unprotected (Rodrigues 2010). The scarcity of clothes implied greater heat dissipation due to poor thermal insulation and the permeability of cotton clothes eventually soaked in sweat.

In general, the difficulty in having clothing other than that provided by the enslaver left this population more exposed to climatic variations than the free poor population. However, the type of clothing did not differ much between the two groups (Assunção 2015).

4.1.3. From the Slaveholders' Perspective

Technical–scientific works (do Alferes and Werneck 1878; Imbert 1839; Taunay 1839) tried to alert farmers in the first half of the 19th century about the risks of bad accommodation and clothing conditions. These authors reported several issues related to inadequate protection against climatic conditions and the precariousness of accommodation, with illnesses and deaths among enslaved people. However, the reality of the farms showed that little importance was given to these alerts. In these authors' view, this condition contributed to rural properties' lack of profitability.

4.2. Clothing and Accommodation of Enslaved People in the 21st Century

It is crucial, to understand neoslavery or modern slavery, to know the value of a slave. When slavery was a legal practice in Brazil, there was a need to guarantee a minimum useful lifetime for enslaved people to guarantee amortisation and return on investment. In the second half of the 19th century, an enslaved person had an average cost per individual sometimes exceeding that of 1 kg of gold (Eltis and Richardson 2003; Higgins 1997; Nogueról 2005; Ribeiro 2017).

In neoslavery, the concern with capital recovery is secondary or almost nonexistent (Soares 2017). This is because there are no associated acquisition costs or deficiencies. In this scenario, concerns about the useful life of these workers cease to exist. It becomes more important to hide the traces of such practices (de Lima et al. 2016; Soares 2017).

Thus, despite all the social and technological evolution that took place in the last two centuries, the working conditions observed in 19th-century enslaved people have been reproduced in a very similar way, or in some cases even worse, in 21st-century slavery, since the initial investment is substantially less.

4.2.1. Physical Structure

Accommodation conditions in neoslavery tend to involve improvised and unsafe structures, as shown in Figure 3 (Brasil 2015). These are, in general, built with a structure of logs cut in the nearest forest and covered with a plastic tarp. They do not have external walls or internal partitions, offering even less protection against the weather than the old 19th-century slave quarters.



Figure 3. Common structure in neoslavery accommodation (Sérgio Carvalho).

The neglect of accommodation conditions for neoslaves can be considered a rule. Even in cases where neoslaves were not housed in canvas tents, the structures in which they were housed did not guarantee these workers' safety, health, or dignity (Brasil 2015; Emprego 2011). The analysis of the elements collected in the sample made it possible to verify workers having to sleep under trees; in corrals; in dilapidated houses, sometimes supported with wood to prevent them from collapsing; and even in sheds next to machines, pesticides, or fertilisers.

All workers in the sample who applied pesticides did not receive any kind of PPE, which significantly increased the chemical risk they endured (Peres et al. 2005), and had to sleep in the same place where these products were stored. Likewise, all those who used chainsaws had to share the accommodation with these machines as well as the fuel and the lubricating oil used to carry out work.

Basic deficiencies were found in the facilities, particularly their precariousness and the lack of minimum physical structures to ensure safety and health at work. It was also found that the spaces intended for rest and physical recovery of the neoenlaved workers in the sample were devoid of utensils and furniture that would guarantee a minimum of comfort (Brasil 2015; Emprego 2011). Even beds and mattresses for night rest were not provided to most of the neoslave workers identified in the sample. They slept on scraps of foam, clothes, or cardboard. Only a few slept in hammocks they owned.

Often, neoslave workers had to be alert to noises that could indicate danger to their physical safety. Without protection against the weather and other minimum comfort conditions, it can be inferred that the night rest period did not adequately fulfil its role.

The general lack of sanitary facilities inside the dwellings (Emprego 2011; Soares 2017) also exposed neoslave workers to increased risks to their physical integrity. It made them more vulnerable to attacks by wild animals and violence from their controllers or even from other people. A similar situation concerned inclement weather, especially at night. The lack of sanitary facilities also contributed to contamination, by faecal coliforms, of the water used for drinking (generally untreated) and the consumed food (via flies landing on the faeces and the food).

The picture of degrading conditions to which the enslaved workers were subjected was completed by the lack of recreational infrastructure in the entire sample, making it difficult to carry out recreational activities on the farms (Emprego 2011). In fact, people were kidnapped to work.

4.2.2. Thermal Protection

As in classical slavery, the classification of heavy work by the current criteria of ISO 7243:2017 (ISO 2017) (Garreto et al. 2021b) is the most common among neoslaves. To this is added the performance of activities in the most diverse weather conditions, including those in colder climates. However, no additional clothing was provided for any of the subjects in the sample. Neoenlaved workers invariably wore their own clothes, which were usually inadequate or in insufficient quantity but would guarantee minimal protection against weather variations.

4.3. What Is Comparable?

Summarising what has been analysed in the previous points in regard to the unequivocal identification of workers in situations of neoslavery from accommodation conditions, four fundamental aspects emerged: sanitary conditions, rest (dormitory), accommodation general structure, and clothing. Of these, the first three were identified as suitable for, at present, making an unequivocal identification of conditions similar to slavery.

4.3.1. Sanitary

Comparing the sanitation conditions between classical slavery and neoslavery, it seems that this parameter presented many similarities between the two periods. There was still a lack of structure that guarantees privacy and sanitary conditions. Physiological needs took place outdoors in the vicinity of work fronts or accommodation.

This parameter is directly related to degrading conditions. It was identified as suitable for the identification process, on the ground, of work in neoslavery conditions.

4.3.2. Rest (Dormitory)

Neoslave workers generally had to rest in the contractors' accommodation structures, similarly as in classical slavery. Furthermore, similarly to slavery in the 19th century, there was usually a lack of a minimum structure to guarantee good sleep and invigorating nights, either because of a lack of beds or hammocks or because of sharing of space with agricultural products, pesticides, fuels, machines, and tools.

This parameter was selected for the characterisation of degrading conditions and can be used as aggravating conditions of exhaustion and, consequently, for identifying conditions of modern slavery.

4.3.3. The General Structure of Accommodation

The last selected parameter was the one that framed the general accommodation structure regarding the lack of protection for the physical integrity of the workers. In the collected sample, this parameter presented, in general, worse conditions than those presented in classical slavery, with the presence of structures without walls or doors and, sometimes, without a roof.

Thus, this parameter was also identified to have high potential for characterising degrading conditions as an aggravating factor in physical exhaustion, as it is directly related to resting.

4.3.4. Clothing

Clothing was not included among the parameters that could be used to identify neoslavery conditions. Although the sample did not identify the supply of work clothes, workers in neoslavery conditions used their own clothes.

Thus, the parallelism between the two situations was deemed unclear, and this parameter was not considered as unequivocal for the process of identification of neoslavery conditions. The fact that neoslave workers generally wore their own clothes nevertheless ensured minimal protection against climatic variations.

4.4. Limitations

The present research was focused on reported slavery situations in the 19th and 21st centuries. However, these reports present two problems. They were not developed either (i) to describe housing situations or (ii) from a scientific perspective. In this sense, they present biases resulting from their specific focuses and their sources' point of view.

The analysis of classical slavery was based on primary sources, namely slave treatment manuals, and secondary sources, especially modern authors who studied the phenomenon of classical slavery. However, none of them analysed specifically housing, nor did they contain analysis from an occupational point of view. The analysed data derived from descriptions, sometimes in a marginal way, about the main focus of these works.

The analysis of modern slavery stemmed from official inspection reports. These, despite containing descriptions and photos for more detailed characterisation, were not collected for scientific purposes, so they may not represent reality in their entirety.

Another issue concerns the scope of work. The collection and analysis of the information were carried out with material exclusively from Brazil, so the conclusions drawn are valid only for Brazil.

However, through the methodological approach, a path was opened that can be used to identify other similar situations in any part of the world.

5. Conclusions

This research sought to identify an unequivocal technical comparison of housing and clothing conditions between modern slavery and classical slavery in the 19th century in Brazilian rural work. For classical slavery, a bibliographic review was carried out in which it was possible to identify the general conditions of employment, accommodation, and clothing of 19th-century enslaved people. The analysis of modern slavery developed from a sample of official reports on the Brazilian government's fight against current slave labour. Such studies made it possible to characterise the living conditions of rural workers under neoslavery in the first two decades of the 21st century. The reports allowed collecting information to identify comparable parameters between the realities of the two historical periods, which is expected to contribute to better determining current conditions analogous to slavery.

The analysed data showed that the housing conditions for neoslaves were, in general, very similar to those of classical slavery. Structures to protect against the weather and ensure health conditions are needed, namely those to support primary and asepsis needs, which were similar to those offered to enslaved people in the 19th century, with little or no infrastructure available for a minimum of comfort for the neoenslaved workers.

Some conditions of exposure to more severe risks than those of classical slavery were also verified. A lack of minimal protection against animal attacks and violence in the accommodation was identified in addition to exposure to chemical agents within the accommodation itself.

Only clothing showed a better overall situation. The used clothes belonged to the neoenslaved workers when they were enticed for this type of work.

Thus, the following parameters were defined for comparison purposes, as supported by technical and scientific evidence:

- toilets (existence and conditions of sanitary equipment);
- rest/dormitory (existence and conditions of physical rest equipment);
- general Structure (existence and conditions of the physical accommodation structure).

These parameters can contribute to the characterisation of conditions similar to slavery through more objective identification and thus support national and international author-

ities in the fight against contemporary slavery, expanding the possibilities of criminal punishment related to the enslavement of people. Other parameters must be analysed, and the most relevant ones, identified. This will allow the creation of an integrated tool that will allow the unequivocal identification of neoslave labour in its different nuances and contexts.

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