Climate Change and Transatlantic Slavery

Uncomfortable parallels, uncertain futures

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Abstract

The article examines the causes and effects of climate change and juxtaposes these with the transatlantic slave trade to glean what lessons, if any, can be learnt. It further explores any systemic linkages between transatlantic slavery and climate change, and proffers sustainable recommendations for mitigating the current dilemmas associated with slavery and climate change. To this end, this study finds that the effects of transatlantic slavery and climate change reveal multi-generational impacts related to a lack of representation, the disproportionate distribution of benefits and costs, cultural losses, and a lack of frameworks to facilitate compensation to those adversely affected. The article concludes by underscoring useful measures that can be adopted to combat the proliferation of similar problems in the future.

Keywords: Climate change, Transatlantic slavery, slave trade, Africa, and Caribbean

Introduction

Research and literature on the potential and real links between modern slavery and climate change is a subject of vibrant academic debate (Bales and Sovacool 2021; Brickell et al. 2018; Brown et al. 2021; Decker Sparks et al. 2021; Jackson and Sparks 2020). The reason for interest in the nexus between modern slavery and climate change is well illustrated by Bales & Sovacool (2021, 1), who maintain that, "if modern slaves were a country, they would be the third largest emitter of carbon dioxide in the world, after China and the United States." More reflective literature on the linkages between the historic

transatlantic slave trade and anthropogenic climate change is more scarce (Davidson 2008; Nuttall 2010). Yet, historians estimate that around 9.4 million enslaved people were forcibly exported from Africa to the Americas prior to 1866 (Curtin 1972; Eltis 2001; Rawley and Behrendt 2005). This is greater than the total population of the English-speaking members of the Caribbean Community (CARICOM[1]) and more than 25% of the population of Ghana. The sheer scale of the forcible movement of persons from the Western coast of Africa has profoundly impacted society. Moreover, as this paper will show, the economic and industrial environment facilitated by the transatlantic slave trade created the conditions for the proliferation of greenhouse gas emissions, notably when the trade was halted, and abolition declared.

This work will be reflective and geared toward learning as much as possible from a past global phenomenon (trans-Atlantic chattel slavery) to inform a current and future challenge in the form of global anthropogenic climate change. The overarching purpose of this work is, on the one hand, to interrogate the underlying principles and enabling environment that facilitated the initial growth and later dismantling of the transatlantic slave trade and to assess if any similarities exist between these factors and those that support worsening anthropogenic climate change. The paper will also review systemic causes and consequences that are shared by transatlantic slavery and climate change to make recommendations to mitigate current and future dilemmas associated with slavery and climate change.

Defining Transatlantic slave trade and climate change

In the context of this study, the term transatlantic slave trade refers to the non-voluntary relocation of persons primarily from West Africa to the Americas. As articulated by Rawley (2005, 2), the slave trade became "part of the European Commercial Revolution. It owed its modern form to the growth of nation states that replaced feudalism and lent their support to the trade, to the rise of towns, the broadening of commerce, the development of merchant classes". While the purchase, transportation and retail of enslaved people was conducted primarily by European merchants, this paper focuses

1 The Caribbean Community (CARICOM) is a grouping of twenty countries: fifteen Member States and five Associate Members…. The Community is multi-lingual; with English as the major language complemented by French and Dutch and variations of these, as well as African and Asian expressions. Source: https://caricom.org/our-community/who-we-are/. Accessed on 24 December 2022.

largely on the contribution of British merchants and their activities within the British West Indies. There are several reasons for this. The first is that any attempt to examine the actions of every European interloper involved in the transatlantic slave trade would constitute a much larger research project than is possible here. The second reason relates to the prominence and success of the British Empire as it relates to the commercial viability and operation of the slave trade. As articulated by Eltis (1987, 4), "Britain was the most successful nation in the modern world in establishing slave labour colonies overseas".

The term 'climate change', is defined within Article 1, paragraph 2 of the United Nations Framework Convention on Climate Change (UNFCCC) as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods" (United Nations Framework Convention on Climate Change 1992, 3). However, the marginal human contribution to natural climate variability led to the environmental problem referred to as anthropogenic climate change. Thus, in the context of this article, the term climate change will refer to 'anthropogenic climate change'. It should also be noted that the terms 'West Indies' and 'Caribbean' are used interchangeably and refer to the archipelago of islands nestled in the Caribbean Sea that stretches from Cuba and the Bahamas in the North to Trinidad and Tobago in the South.

Transatlantic Slavery: Patterns and Causes

Transatlantic slavery did not occur in a vacuum. Newly acquired territories in the Caribbean needed to be put to productive use (particularly, for the most part, in the absence of the discovery of large deposits of gold in most islands of the British West Indies), so colonial administrators turned to agriculture. Tobacco and sugar cane - among, the most popular crops chosen - demanded a supply of labour to support their production. However, the indigenous populations within these islands were unaccustomed to the harsh and demanding daily requirements associated with plantation work. The result was that many indigenous persons perished as the metropolitan authorities attempted to establish commercially viable agricultural plantations throughout the archipelago.

As explained by Williams (1942, 11), "the original inhabitants of the Caribbean islands were speedily exterminated by the Spanish conquerors….

it was to satisfy the labour requirements of the West Indian Islands that the greatest migration in recorded history took place. This was the Negro slave trade." The availability of a seemingly inexhaustible supply of African labour, the relatively close proximity of West Africa to Europe coupled with natural Tradewinds which aided ships crossing the Atlantic Ocean to the Caribbean, made African labour an economically viable choice. The initial cost of acquiring slaves[2] on the African continent, paid for by traders that exchanged capital or weapons (to tribal chiefs that sought to gain a military advantage over other tribes), was overshadowed and outweighed by a lifetime of free labour by those who had been captured and removed from the continent.

The need for plentiful and affordable (in this case, free) labour as an input into large-scale, export-oriented agriculture, facilitated the proliferation of transatlantic slavery for hundreds of years. It should be noted that the idea of utilising slaves for mass agriculture did not begin with the triangular trade now referred to as the transatlantic slavery. Slave labour was a pivotal component of the empires and economies of both the Greek and Roman civilisations (Williams 1944). This point, however, highlights another important driver for the institutionalisation of slavery in the "New World". The impetus of "Gold, God and Glory[3]" served as an important driver in the development of European empires (Winks 1963).

Indeed, the development of plantation economies in the Caribbean was not solely (or even primarily) geared toward the accrual of personal wealth, but rather in service of a broader objective: empire building. European territories were engaged in a competitive and violent race to establish

2 Research published by the University of Cambridge in 2015 highlighted that 54 male and female slaves cost £5,100, a sum equal to around £500,000 at that time. The article goes on to highlight that "buying cheap slaves to work the land for sugar cane would 'relieve the estate from the expense of buying cattle', and allow for more sugar to be sold for rum, which brought in a profit of £4,500 a year, equal to around £400,000 today." (University of Cambridge 2015)

3 The term "God, Gold and Glory" is a commonly used refrain among historians when examining the motives of the imperial powers that sought to conquer territories in the Americas (at that time referred to as the "New World"). Reference to God refers to the fact that many of the interlopers viewed their actions as part of a larger religious mandate to spread Christianity among the newly encountered peoples through the work of missionaries (and by force if necessary). Gold underscores the economic motive for their activities in the region. Considerable resources were deployed in pursuit of locating and developing natural resources (especially gold), from the Americas. Glory refers to the competition between European nations to derive as much prestige amongst their neighbours from their activities in the region (International Encyclopedia of the Social Sciences 2022; Osei and Dover 2004; Winks 1963).

powerful and far-reaching Empires through the subjugation and colonisation of territories and peoples throughout the globe – as far as their technology, artillery and administrative capacity would allow. Caribbean territories were, therefore, transformed into colonial outposts that would serve to facilitate the production of raw materials or primary products, often to be used in Europe as inputs into the manufacturing process of more sophisticated products. The economies of the Caribbean, therefore, served to fuel the growth and development of European economies and empires. The race to acquire more territories and the militaries needed to accommodate such growthwasfinanced in part by the economic contribution of colonies already under European rule. The transatlantic slave trade supplied these colonies with a source of cheap labour, which proved to be a critical component to the economic welfare of the colonies in the Caribbean and, by extension, their metropolitan counterparts.

The importance of African slave labour and the slave trade to the European economy, specifically to the growth of British enterprises, cannot be overstated (Williams 1944)**.** In his contribution to the subject, Beckles (2013: 82) indicates that "Britain extracted more wealth from enchained and enslaved Africans than any other European nation. The nation's wealth was driven by the wealth of the slave system. It became the first slave-trading superpower and the first industrial giant". However, it should be noted that while slavery may have seemed more affordable, it was later underscored as being more expensive in the long term. Adam Smith noted that "the work done by slaves, though it appears to cost only their maintenance, is the dearest of any. A person who can acquire no property can have no other interest than to eat as much, and to labour as little as possible" (Smith 1723-1790, 345; Williams 1944, 6). In his seminal work, "Capitalism and Slavery", Williams (1944) underscores how a desire to maximise wealth extraction and reduce costs contributed in no small part to the eventual abolition of slavery. Williams argued that the efficiency gains from the deployment of fossil-fuelled machines to enhance agricultural production were particularly attractive when compared to the cost of maintaining enslaved people and the losses incurred from slave revolts and rebellions.

To illustrate the centrality of slaves and fossil fuels to agricultural and industrial development, it may be helpful to briefly review how humanity's energy supply and systems have developed over time. As explained by Smil (2004: 550), the ability to harness and utilise greater magnitudes of energy

contributed significantly to improved standards of living, as it brought with it "increased food harvests, greater accumulation of personal possessions... and vastly enhanced personal mobility". Energy use in the Caribbean (and the Pacific) was significantly transformed by colonial endeavours. Small islands in both regions transitioned from using smaller quantities of kinetic energy from human and animal labour, necessary to support subsistence farming, too much more significant energy production that initially involved the use of water wheels and windmills and later, fossil fuelled steam engines and turbines (see Fig 1). Certainly, the sharp and significant increase energy deployment following the abolition of the slave trade in the Caribbean was in fact due to the transition to fossil fuels as an energy source.

This article argues that slavery was to agricultural production in the Caribbean what fossil fuels were to industrial production in Europe. Enslaved Africans and fossil fuels served as valuable factors of production, with the former serving as a considerably less efficient input than the latter. Similarly, in much the same manner that the mistreatment and abuse of millions of Africans and systemic racism became an invisible externality of European capitalism, climate change now serves as an example of an unintended externality of the industrial revolution and global capitalism. While voluntary human labour and limited animal labour were sufficient to meet the needs of subsistence agriculture, it could not adequately meet the demands of large-scale, export-oriented agriculture. More significant factors of production, and more specifically, greater magnitudes of energy supply, were required to support large-scale agricultural production. Forced labour and later, fossil-fuelled steam engines and turbines, helped to support agricultural and industrial development in the Caribbean and Europe, respectively.

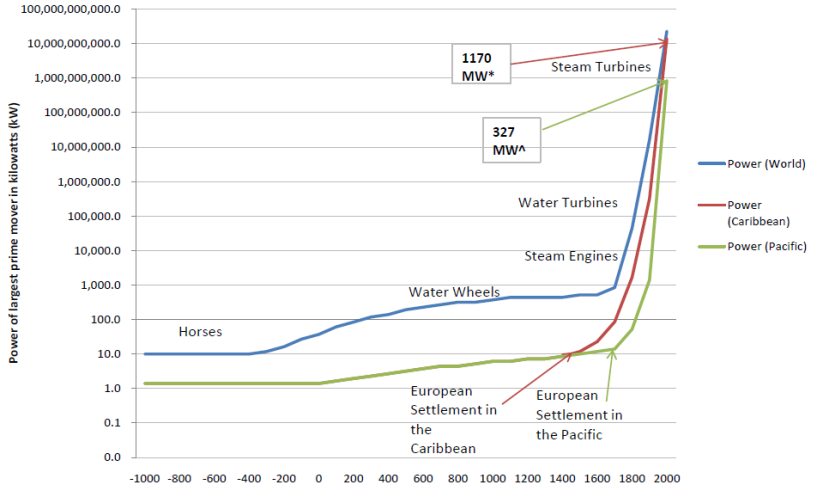

Figure 1: Diagram showing the Transition from traditional to more modern forms of energy use. Source: Niles (2013)

Causes of Climate Change

On the backs of increased agricultural production, industrial development and competition came a level of unparalleled economic development at the time. However, this economic boom came at an environmental cost that was unknown at the time. Greenhouse gas (GHG) emission records can be accessed from 1850 onwards, just twelve years following the abolition of slavery in the British West Indies. As the plantocracy transitioned from slave to indentured/paid labour in the Caribbean, industrial operations were also being transitioned to fossil-fuelled sources of energy in Britain. The results (in terms of historical emissions) of transitioning from primarily human energy to fossil fuels are clearly illustrated in Figure 2. Between 1850 and 1915, GHG emissions from the UK increased fivefold as it transitioned from the use of wood to increasingly efficient coal-powered steam engines. Though momentarily thwarted in the 1920s, this upward trajectory continued until 1971.

In addition to powering other industrial activities, it should be noted that "Britain had the largest mining industry in Europe thanks to coal" (Allen 2012, 22). Allen (2012) points out that the primary use of the engine was to drain

mines. Local production of coal, therefore, served as an important driver of industrial and economic development in Britain.

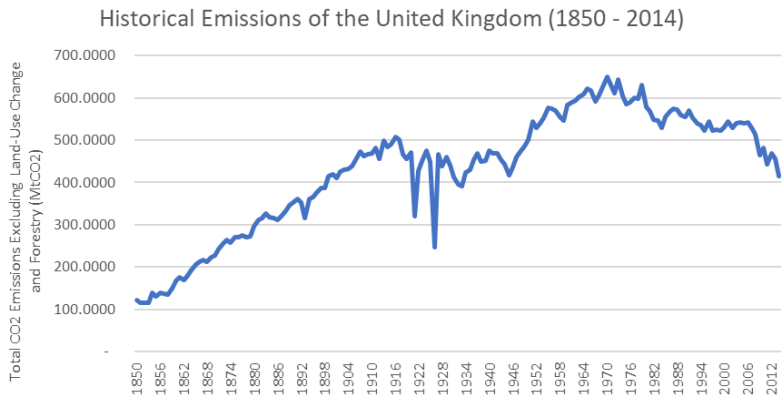

Figure 2: *Historical Emissions of the United Kingdom (1850 - 2014),* Source: World Resources Institute.

The considerable rise in emissions was driven not only by the large-scale coal within Britain but by the fact that coal became the energy base for industrial development. Incidentally, it was the shift from slave labour to fossil-fuelled machines that led to the emergence of an existential environmental dilemma: anthropogenic climate change. This link between initial economic and industrial development and climate change is recognised in the Preamble of the UNFCCC, which states that "the largest share of historical and current global emissions of greenhouse gases has originated in developed countries" (United Nations Framework Convention on Climate Change 1992, 1)**.**

Britain was certainly not alone in its advance toward coal-driven industrialisation. It was accompanied by other metropolitan nations that sought to enhance economic development by transitioning from human kinetic energy to chemical energy provided by coal. At the time, carbon emissions were simply an (unimportant) by–product of industrial development driven by the transition to a more efficient energy source. The industrial revolution based its growth on the model of operations that was essentially linear. Economic activities were based upon processes that allowed raw materials (the input) to undergo a process of value addition, resulting in the production of a more sophisticated product and outputs deemed non-useful and referred

to as waste. The impact of many of these non-useful waste outputs upon the wider society and the environment was largely ignored.

Sugar production was no different. The transition of the production process from human/animal-powered agro-processing activity to a fuel-powered machine-based industrial process thus all occurred within the same framework of a linear process that transformed cane stalks into molasses or raw sugar, without much consideration for any waste by-products (or wider societal or environmental impacts) that were created as a result. Within this configuration, the expulsion of Carbon Dioxide (CO_2) from industrial production as a waste product resulted from how economic activities were designed and engineered at the time. The cumulative effect of CO_2 emissions from the dawn of the industrial era to now has resulted in a considerable historical contribution to climate change. Having outlined the primary causes and drivers of transatlantic slavery and climate change, their past impact and current implications will therefore be reviewed.

Parallels: real or imagined? The long tail of Transatlantic Slavery and Climate Change

A thorough review of the social and economic impact of transatlantic slavery is not possible within this text. However, this study seeks to briefly outline some of the primary effects brought about by the forced trade in African women, men and children that occurred over centuries. In so doing, this paper examines the short and long-term effects of transatlantic slavery on the development of the African, Caribbean and European nations (with a specific focus on Britain) that were involved in this trade. Similarly, some critical impacts of climate change will be juxtaposed to those of transatlantic slavery to assess whether there are any grounds to compare the intergenerational effects. Moreover, a key reason for engaging in this research is to ascertain whether or not any lessons can be learned from past atrocities, like slavery, that could inform the global effort to combat climate change, particularly in the Caribbean.

Lack of individual legal identity and representation

The legal system that facilitated the proliferation in the trade of slaves across the Atlantic *essentially* converted African personhood into property. Individuals being traded were stripped of any intrinsic rights to which they

may have been entitled and were instead relegated to mere factors of production within a larger agrarian economy and society. Similarly, at present, environmental ecosystems often exist merely as factors of production within a more extensive system – a source of raw materials, ecosystem services or as a repository for the waste products of economic activities. The intrinsic rights of nature are not yet fully established within international law and, have thus far been recognised primarily by jurisdictions within Latin America, the US, Australia and New Zealand (Challe 2021; Daly 2012).

The inability to locate or identify the rights of an individually traded bondservant or a natural ecosystem outside of a bill of sale (i.e. property rights) results in a lack of *locus standi* and representation within judicial systems when persons sought to assist the welfare of the enslaved or the environment. The transition to more sustainable energy systems may need to feature a parallel transition of legal systems to further increase the representation of the natural environment in the courtroom. This is only likely to intensify as climate change litigation continues to increase across the globe (United Nations Environment Programme 2020).

Disproportionate distribution of benefits and costs

Not only did European enterprises and nations benefit from free labour, but they could also benefit from commercially exploiting and owning inventions and innovative contributions made by enslaved people (Johnson 2017). Several of these inventions, include a cotton scraper, a bedstead and a steamboat propeller, served to further the industrial development of the metropolitan countries and their colonies. As a result, those responsible for the operation of the plantations in the Americas were able to benefit from both manual and skilled labour, as well as the intellectual value added by the enslaved population.

Even further, the physical goods provided by European colonies help lay the foundation for developing more sophisticated economies within the metropolitan centres. Within such a configuration, later referred to as “plantation economies”, such nations served merely as appendages of a larger empire (Best 1968; Girvan 2009). The role of plantation economies on the periphery of the empire was, in part, to supply primary goods that could serve as inputs into more sophisticated economic and industrial processes in the metropolitan state. The structure of the economic and

financial relationship that existed at the time resulted in the manufacture of value-added 'secondary and tertiary products' in the metropolitan centre and the continuous (usually singular mono-crop) production of more basic goods and raw materials of lesser value within colonial centres. Moreover, as articulated by Girvan (2009: 2), the establishment of plantation economies in the Caribbean had the longer-term impact of "permanent dependence: of growth without development, of adjustment without structural change, of diversification without transformation".

This narrative mirrors the disproportionate benefits gained from the industrial system that drove anthropogenic climate change. To be clear, as alluded to earlier, the proliferation of the transatlantic slave trade and the climate crisis now threatening the future of the planet are not tangentially related. Slavery provided a significant portion of the capital and economic basis that facilitated a coal-powered industrial revolution. Williams (1944) ably demonstrated how the tremendous wealth from the slave trade helped finance the industrial expansion and economy of Great Britain, not only concerning heavy industry and agriculture, but also concerning insurance and banking. In his own words, "the triangular trade made an enormous contribution to Britain's industrial development. The profits from this trade fertilized the entire productive system of the country". Beckles (2013: 82) goes further and adds that:

> "Britain extracted more wealth from enchained and enslaved Africans than any other European nation. The wealth of the nation was driven by the wealth of the slave system. It became the first slave-trading superpower and the first industrial giant. Britain benefited the most from the slave-based Caribbean economy within the wider Atlantic system, an intricate web in primary commodities, manufactured goods and enchained people. The spectacular economic results were symbolic of the relations that constituted Britain's reputation at the end of the eighteenth century. It had become the leading industrial nation in the world and the dominant global slave investor."

It is neither historically accurate nor helpful to future students of history or climate science to highlight Britain as the 'birthplace of the Industrial Revolution' (Coleman 1992; Crofts 2002; Newman 2017) without simultaneously and correctly citing the systems and sources of wealth that made it possible, and their consequent impact on the environment. To

accurately assess the disproportionate distribution of the costs and benefits of transatlantic slavery to metropolitan nations and their former colonies, one must juxtapose not merely the short-term loss of labour and human life but also the longer-term structural socio-economic impacts of the immense wealth accrued by metropolitan nations. Similarly, the tremendous wealth and productive development spurred by the Industrial Revolution should be assessed alongside the devastating impacts of climate change on the nations that bore the brunt of the transatlantic slave trade. The industrial revolution facilitated a vast number of other productive economic activities that demanded higher energy production, far beyond anything that could be supplied by slave labour. As alluded to earlier, the industrial revolution facilitated an energy transition away from the deployment of slave labour to the use of chemical energy. This transition gave birth to the fossil fuel industry.

Loss of culture and identity

Africans that survived the arduous journey across the Atlantic were stripped of their names, language, culture, and any semblance of their identity, except for the colour of their skin, which was ably used as justification for their conversion from persons to property. The generational impact of this loss of culture and identity is profound and far-reaching – both for African nations and their surviving descendants within the Caribbean. The effects of institutional segregation and discrimination on the culture and identity of persons of African descent are also extensive but cannot be examined within this paper. There remains no supra-national and globally normative legal architecture within which reparations or compensation for the generational impacts of transatlantic slavery can be addressed.

The loss of culture and identity due to climate change is a field of growing interest within academia. There has been some measure of agreement that "climate change threatens cultural dimensions of lives and livelihoods that include the material and lived aspects of culture, identity, community cohesion and sense of place" (Adger et al. 2012: 112). Indeed, as climate impacts such as sea level rise and increasingly more intense hurricanes become more frequent, dislocation and cultural losses are likely to result (See Dugan 2007), and perhaps become the norm, particularly in climate-vulnerable nations like Small Island Developing States (SIDS). Though there is recognition of future losses, the nature or specific significance of cultural losses to individuals,

communities and entire societies is not yet well understood (Tschakert et al. 2017).

The current provisions within the rubric of the UNFCCC to address loss and damage took more than two decades to be negotiated after first being raised within the context of insurance and/or compensation for future loss and damage due to climate impacts (Roberts and Huq 2015). The initial legal response to the response to the recognition of the financial and other adverse future impacts of climate change appear in Article 4.8 of the 1992 UNFCCC, which states that "the Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and/or the impact of the implementation of response measures" (United Nations Framework Convention on Climate Change 1992: 8-9).

Article 4.8 continues by highlighting the effects of climate impacts in climate-vulnerable nations, including SIDS. Twenty-three years later, Article 8 of the Paris Agreement specifically highlighted the "importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage"(United Nations Framework Convention on Climate Change 2015: 26). However, while recognising future economic and non-economic losses, as well as damages that will be brought about by climate change on the one hand, the Paris Agreement prohibits explicitly future generations from using its text as the legal basis upon which to seek reparations as it stipulates that "Article 8 of the Agreement does not involve or provide a basis for any liability or compensation" (United Nations Framework Convention on Climate Change 2015: 26).

Financial Support / Compensation

When the Emancipation Act was declared in 1833, compensation was offered to the plantation owners for the loss of their property, such as the slaves. In Britain, the state borrowed £20 million to compensate slave owners. Thorne (2012, 154) notes that the loan constituted "the largest single financial operation undertaken by the British state to date" (Draper 2010:

270; Thorne 2012: 154). This amount, paid out as £15 million in cash and £5 million in government securities, accounted for forty per cent of Britain's annual expenditure for the year in question, represents approximately £200 billion in today's money and was only repaid in 2015 (Manjapra, 2019). In sharp contrast, the enslaved population and their descendants have never received or been offered any form of financial compensation or reparations.

As it relates to financial flows or support within the context of climate change, global subsidies to the fossil fuel industry were "valued at $4.7 trillion (6.3 per cent of global GDP) in 2015 and…projected at $5.2 trillion (6.5 per cent of GDP) in 2017" (Coady et al. 2019: 5). Coady et al. (2019, 5) reveal that the largest subsidisers in 2015 were "China ($1.4 trillion), United States ($649 billion), Russia ($551 billion), European Union ($289 billion), and India ($209 billion)". These norms persist despite ongoing research that has highlighted that shifting financial support from the fossil fuel industry, which is driving climate change, to more sustainable energy industries is likely to substantially reduce global carbon emissions, decrease air pollution and increase state revenue (Coady et al. 2017; Ellis 2010; Ouyang and Lin, 2014).

Moreover, while financial support for fossil fuels persists, a robust legal framework to facilitate financial support or compensation for communities that have already been adversely affected by climate impacts is lacking and only really exists within the context of insurance schemes (such as the Caribbean Catastrophe Risk Insurance Facility) which operates within the rubric of loss and damage as aforementioned.

In the case of slavery and climate change, compensation and financial support have been directed towards the incumbent industry, which stands to lose from the proposed change or transition. In contrast, financial support for those affected by the impact of the actions of industry has been slow within the context of climate and non-existent within the context of slavery.

Discussion

Transatlantic slavery and climate change have, at their core, a unique policy problem known as the "Tragedy of the Commons". In such a configuration, any individual member of the commons would be disadvantaged by taking unilateral action to cease an action that results in personal or domestic gain but more comprehensive societal (or global) losses, as other members of the commons would be able to reap the rewards of continued unfettered access to

the resource in question. This phenomenon produces perverse incentives for all parties to continue engaging in behaviour that secures only their interests unless all parties agree upon a joint course of action or unless an individual or smaller group has the power to make a binding decision that it can enforce upon all other parties. Though originally developed to explain the problem of overpopulation (Hardin 1968), the concept of the Tragedy of the Commons has been used to frame or contextualise problems related to resource management, including Climate Change (Feeny et al. 1990; Lloyd 2007).

In the case of the transatlantic slave trade, if Britain or any other colonial power stopped trading in slaves while others continued, they would have faced a comparative economic disadvantage when compared to other nations that benefited both from free slave labour on the plantations in the Caribbean and from the jobs and wealth created by the trade itself. Put simply, the cost of production (specifically in relation to the price of labour) would have been higher on British-owned plantations compared to those owned by the citizens or subjects of other colonial powers, where slave labour could be accessed. Moreover, the British shipping sector, supported by the banking and insurance industry, who were heavily invested in the movement of human cargo from Africa to the Caribbean, would have been adversely affected by a decline in commerce. Unsurprisingly, therefore, when Britain abolished the slave trade in 1807, its naval fleet also began to intercept the slave ships and trade of other colonial powers to disrupt their access to free labour. To some degree, therefore, Britain effectively mitigated a "Tragedy of the Commons" within the context of the transatlantic slave trade through unilateral action supported by formidable military power.

Within the context of climate change, the Preamble of the (United Nations Framework Convention on Climate Change 1992, 1) acknowledges that there is widespread recognition that "change in the Earth's climate and its adverse effects are a common concern of humankind". Despite this shared concern, several countries – and in particular, a number of developed and emerging economies - have displayed a considerable reluctance to make binding commitments to lower their greenhouse gas emissions. As expected within a "Tragedy of the Commons" scenario, this reluctance is primarily due to an unwillingness to risk stymieing their economic growth in comparison to other nations that have not made equivalent commitments. Unlike Britain's action concerning the transatlantic slave trade, unilateral action of any individual party is unlikely to occur. To begin, Britain's enforcement of its unilateral

actions was not made in the interest of the slaves themselves but rather in its economic interest.

Similarly, while all countries may be concerned about the common problem facing humanity in light of the climate crisis, these are often superseded by domestic interests. Furthermore, there does not seem to currently exist a singular nation with the required hard or soft power to compel all nations to make binding commitments to constrain their use of fossil fuels. Notwithstanding this, the UNFCCC does recognise that those nations that were able to benefit from historical emissions associated with the industrial revolution that drove climate change have a responsibility to lead efforts to mitigate the climate crisis. One of the foundational principles of the UNFCCC (1992: 4) states, "Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities" (UNFCCC, 1992, Article 3, paragraph 1). Notwithstanding this, the pace, scale and volume of actual emission reductions lag significantly behind what is required to avoid irreversible damage to the climate system. Thus far, domestic political, social and economic interests continue to supersede the long-term interests of the commons.

Table 1: Climate Change and Transatlantic Slavery: Real or Imagined Parallels?

Variable	Transatlantic Slavery	Climate Change
Tragedy of the Commons	Any individual nation that abolished slavery or the slave trade domestically would have faced a competitive disadvantage that did not exist in other territories that did not have to pay for labour and benefited from the commerce generated by the trade.	Countries fear becoming less competitive than territories that use cheaper and widely available fossil fuels.
Energy Transition	Fuelled in part by energy transition (animal and subsistence labour insufficient to support export-oriented commercial agriculture)	Fuelled in part by energy transition (chemical energy is more efficient than slave labour)
Lack of Representation	No individual legal human rights. Instead, the owner held property rights to the slave.	No locus standi for the global environment or future generations

Variable	Transatlantic Slavery	Climate Change
Disproportionate distribution of benefits and costs	British slave owners and the economy benefited from the enormous wealth generated from the slave trade. Slaves and former colonies bore costs associated with the transatlantic slave trade.	Britain derived considerable economic benefits from the historical use of fossil fuels deployed to power the industrial revolution. The cost of climate change impacts is particularly high among SIDS, like those in the Caribbean.
Loss of culture and identity	African slaves in the Caribbean were stripped of their names, language and culture.	Climate change poses a real threat to the cultural heritage, identity and other cultural dimensions of life, particularly for those in climate-vulnerable locations.
Compensation	£20 million was borrowed by the British government to compensate slave owners. No agreed legal framework for reparations for descendants of enslaved populations or the nations they occupied.	Attempt made to prevent future generations from using the Paris agreement as the legal basis for reparations. No agreed comprehensive framework for compensation or reparations.

Having highlighted several possible parallels between the transatlantic slave trade and climate change, it would be reasonable to enquire if sufficient lessons from the former atrocity are being applied to the latter crisis. Firstly, energy transitions seem to be a key driver of large-scale scenarios that could adversely impact significant populations of human, plant and animal life. As a concerted effort is being made to transition to less carbon-intensive forms of energy, care should be taken to avoid inadvertent "external costs or impacts" of the ongoing energy transition. This is not only critical to ensuring that large

hydroelectric dams do not contribute to methanogenesis[4] (Giles 2006; Ni et al. 2022; Trojanowska et al. 2009), but also in ensuring that global reserves of natural resources employed as a part of the transition (such as lithium) are not depleted. In this regard, a greater intersection of the work of the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Resource Panel (IRP) may be required to secure a globally sustainable energy transition. Additionally, concerns surrounding a *just transition* - particularly as it relates to the need for retraining and retooling populations worldwide - are critical as the current energy transition continues to displace and disrupt livelihoods connected (directly and indirectly) to fossil fuels.

Secondly, there is an uncanny, if not uncomfortable, similarity that exists between the lack of representation that was available to slaves and the large-scale absence of representation for the natural environment. The slave and natural environment were/are viewed through the lens of property law. Both could or can be sold, traded, willed or assigned based on the desires of their respective owners, and both tend to be represented within legal systems by their owners (or appointed representatives). The transatlantic slave could not address the Court of England as an individual human any more than a species of flora, fauna, or a natural ecosystem could address the Conference of the Parties of the UNFCCC. The point here is not merely about communication, but rather about representing the affected party solely based on their interests.

In the same manner that the interests of the slave were represented in legal systems through the lens of the owner and their concerns, the interests of the environment are often represented solely through an anthropocentric lens and are often focused on the socioeconomic and political impacts on individuals, states and commercial entities. The slowly emerging trend to recognise the intrinsic rights of nature within legal systems (alluded to earlier in this paper) may, therefore, be a useful step toward resolving the current lack of representation.

A third observation relates to the disproportionate distribution of benefits and costs from the transatlantic slave trade and climate change. In both scenarios, one party was able to conduct an activity that resulted

4 In addition to other environmental problems caused by the construction of large hydroelectric dams (which include disruptions to local habitats and ecosystems), they can also result in the production and release of methane into the atmosphere. In this regard, Giles (2006) argued that "the global-warming impact of hydropower plants can often outweigh that of comparable fossil fuel power stations."

in a tremendous increase of their wealth while simultaneously having severe harmful impacts on the welfare of African slaves (in the case of the transatlantic slave trade) and the environment and climate vulnerable populations (concerning climate change). Additionally, in both scenarios, the short- and long-term impacts of the activities in question must be considered. In the case of the transatlantic slave trade, as mentioned earlier, stripping the enslaved of their personhood and subjugating them, by law, to property contributed to broader systemic discrimination that persists today and may yet be a challenge for future generations. The effects and costs of anthropogenic climate change are also trans-generational. Climate change impacts, in the form of more intense and frequent hurricanes and droughts, as well as sea level rise, are existential threats, not merely to the – and short-term security of climate-vulnerable populations but to the long-term viability and stability of the planet's climate system which poses a significant risk to the welfare of future generations of human, plant and animal life on Earth. The internalisation of "external costs," particularly for planning and budgeting considerations, may contribute to a more sustainable trajectory in the future.

Fourthly, profound transgenerational losses related to culture, identity and heritage have already occurred due to the transatlantic slave trade and climate change. Both occur(ed) because of human activity focused on reaping economic rewards, and both have resulted in the forced displacement (and, in some cases, the loss of life) of local populations. In the case of the transatlantic slave trade, the forced removal of their indigenous African names, and the prohibition of all expressions of indigenous culture or religion represented one of the most significant cultural erasures in modern history.

In addition to attempting to sever the enslaved ties to their homeland, these acts also made it incredibly difficult for future generations (i.e. the descendants of the enslaved) to learn about their cultural heritage or identity. Similarly, as climate impacts become more intense and frequent (Intergovernmental Panel on Climate Change 2013, 2021), cultural erasure and loss cases will become more common. It is worth mentioning that populations in climate-sensitive locations that are unlikely to exist in the future due to sea-level rise or other climate impacts are particularly vulnerable to cultural erasure. Unfortunately, instances of adverse cultural effects due to forced relocation related to the climate change impacts have already been recorded in the Pacific and the USA – particularly among tribal communities (Bronen 2009; Charan, Kaur, and Singh 2017; Maldonado et al. 2013; Tabe 2019). In

Vunidogoloa, Fiji, Charan et al. (2017) recount the significant emotional trauma caused to villagers who were forced to "*retreat from their customary land which has been part of their culture and identity for their entire life*" (Charan, Kaur, and Singh 2017, 20). In such cases, as much as can be predicted through scientific models, cultural mapping and archiving in climate-sensitive locations should be prioritised within the UNFCCC framework of activities to minimise cultural erasure.

The fifth is related to the fact that compensation, reparations and restitution are critical to correcting or addressing historical injustices. Suppose future generations are to be able to access relief for harms caused by the historical and current insistence on burning fossil fuels. In that case, legal remedies and mechanisms must be established to facilitate such applications. Unfortunately, to date, almost the converse is true: legal mechanisms that exist thus far to develop a framework of support for loss and damage caused by climate change effectively bar future generations from using the text (in its current form) to access relief. If the current trajectory remains, there will be no positive law basis for future generations to seek reparations for harm, loss or damages brought about by climate change. As noted, in the case of transatlantic slavery, compensation was allocated to slave owners for the loss of their property.

Interestingly, approximately 80 per cent of the £20 million compensation "went to absentee claimants – owners of Caribbean plantations residing in Great Britain" (Draper 2010, 147; Rauhut 2020, 128). Hence, the lion's share of compensation funds was not employed to develop the Caribbean, but rather, they were re-invested throughout the British economy. Unsurprisingly, therefore, the Caribbean Community (CARICOM) Reparations Commission (CCRC) have focused their global advocacy efforts on institutional reparations geared toward regional development instead of focusing on reparations to individuals (Caribbean Community 2022; Matthews 2017).

Notwithstanding, there remains no global framework for reparations for transatlantic slavery or a draft rubric under formal consideration. What does exist, however, as of 2001, is an acknowledgement within paragraph 13 of the United Nations (UN) Declaration Against Racism, Racial Discrimination, Xenophobia and Related Intolerance that "*slavery and the slave trade are a crime against humanity and should always have been so*" (United Nations 2001, 16). Thus, increased academic interest and recommendations related to

reparations for transatlantic slavery (Beckles 2013; Draper 2010; McCarthy 2004; Posner and Vermeule 2003; Rauhut 2020; Shepherd and Reid 2019), accompanied by institutional advocacy within the Caribbean, and international legal framework or decision related to reparations for the transatlantic slave trade seems unlikely.

Finally, and perhaps most importantly, it would be remiss of the author not to highlight how growth-driven capitalism exacerbates the aforementioned Tragedy of the Commons. An insatiable and expansion-oriented capitalist system created and continues to create an environment within which growth is prioritised and valued above impacts upon people or the planet. The same system that facilitated the trade in millions of human lives across the Atlantic continues to drive the use of fossil fuels and a changing climate. Capitalism, therefore, served to drive expansion and economic growth, but its primary concern was not development. Investments were made and driven by the interests and imperatives of those with the political and financial capital to further their expansion-oriented goals and objectives. In the case of slavery, these investments were driven largely by European state actors (usually monarchs and clergy). Concerning climate change, investment decisions emanated from state and private companies seeking to derive economic rents from natural resource endowments. The challenge facing future generations of leaders is to ensure that economic growth serves and is constrained by the development needs of the planet and all of its inhabitants.

Conclusion

This article sought to juxtapose transatlantic slavery and anthropogenic climate change, not merely to highlight difficulties associated with the tragedy of the commons but also to probe whether lessons learnt from a former atrocity can serve to prevent another. Some of the current systemic errors associated with transatlantic slavery are being mirrored or repeated as it pertains to climate change.

The study illustrated that transatlantic slavery and climate change are not unrelated incidents of circumstance. Instead, transatlantic slavery provided the energetic base that supported export-oriented commercial agriculture in the Caribbean that could not be supplied by the existing kinetic energy base supplied by human and animal subsistence labour. Later, with the proliferation of increasingly efficient steam engines, chemical energy - in the form of fossil-

fuelled engines, replaced slave labour. This energy transition led to historical emissions of greenhouse gases, the driving force behind anthropogenic climate change.

A closer look at the effects of transatlantic slavery and climate change reveals multi-generational impacts related to a lack of representation, the disproportionate distribution of benefits and costs, cultural losses and a lack of frameworks to compensate those adversely affected. The list of impacts examined in this paper is not meant to be exhaustive but illustrative. The author intends to publish further works on this subject, examining how religion, gender and capitalism – as examples of cross-cutting societal value-based norms - influence(d) both the transatlantic slave trade and climate change.

Another subject worthy of additional investigation relates to a comparison of the nature and pace of the transition from the end of slavery in Britain to complete emancipation in the Caribbean on the one hand, and the ratification of the UNFCCC and the process being undertaken to facilitate the future cessation of fossil fuel use and/or the achievement of goals and objectives stated within the agreement. In the case of slavery, even after full abolition, an initial "apprenticeship" period of continued labour was implemented before being prematurely abandoned. This was done to preserve the enslaver's labour force by keeping the formerly enslaved population on the plantation while proprietors sought to secure new sources of (paid) labour. It was also done because it was thought that former slaves needed to be taught how to be 'cultured', civilised and productive citizens within the colonies prior to their full emancipation. The process of transition toward full emancipation, therefore, seemed entirely geared toward securing the interests of former enslavers and the colonial administration. Support was not extended to those suffering from the transatlantic slave trade. This paper has already demonstrated that significant financial aid has already been channelled to fossil fuel industries through subsidies. Future research could examine the extent to which proposed pathways to reduce greenhouse gas emissions and transition to more sustainable energy sources within the rubric of the UNFCCC balances industry and economic concerns related to mitigation efforts and the interests of the environment and those adversely affected by climate change impacts.

The article's primary motive, however, is to provoke the reader to question not merely past tragedies but also to interrogate how current and

future transitions (particularly concerning energy production) might impact future generations. In so doing, the author hopes that greater care is taken to minimise or avoid external costs or impacts of the current sustainable energy transition on the environment (particularly regarding resource management and depletion) and on vulnerable human populations worldwide.

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