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**The Incompatibility of Sustainable Tourism and Growth: How has Structural
Violence Stemming from Tourism Affected Bali's Subak System?**

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Abstract:

The aim of this paper is to explain how the structural violence of the tourism industry has affected Bali's culturally significant subak system, a traditional cooperative social system that controls the water needed for the functioning of rice farming. In addition, by exploring the environmental, social, and economic effects of these structurally violent issues within capitalist tourism, this paper aims to contribute towards the discourse surrounding the incompatibility of sustainable tourism and growth. This dissertation will begin with a review of sustainable tourism, the processes within tourism commodification and structural violence, and a background description of tourism in Bali and subak. Before establishing the production of inequality and waste as a structural issue within tourism, the research section will initially explain how Bali's subak has been affected by this inequality and waste. This paper finds that inequality and waste has significantly contributed to Bali's water crisis, the dispossession of subak land, the inability to perform necessary rituals that harmonise Bali's Tri Hita Karana principles, and the disruption of subak rice farming as a viable occupation. The discussion section will examine the tourism industry with a capitalist lens, where tourism holds a central role in sustaining capitalism. The tourism industry sustains itself through the harnessing of value from its production of inequality and waste creating further opportunities for tourism development, thus, giving the inequalities and waste its structural feature. This paper argues growth's central role in the production of structural violence has negatively affected subak, suggesting the incompatibility of sustainable tourism and growth.

Subak rice field



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Introduction

This dissertation argues that the structural violence stemming from Bali's tourism industry has harmed the cultural and economic value of Bali's subak system. My main argument will establish tourism's production of waste and inequality as a structurally violent issue caused by the tourism industry, which has prevented essential functionings of subak. This will link to a broader discourse surrounding the incompatibility of growth and sustainable tourism, where the structural nature of these violent issues stemming from tourism suggest the incompatibility of growth and sustainable tourism in a capitalist context.

The World Tourism Organisation (UNWTO) led by the United Nations has long advertised tourism as a tool for economic growth. As the negative environmental and cultural effects of mass tourism became clear, sustainable tourism has been promoted to reconcile the tensions between tourism growth and sustainability. Within the sustainable tourism UNWTO promotes, growth holds a central role alongside sustainability goals. However, despite calls for sustainable tourism and *green* growth, it is not clear to what extent economic growth can be decoupled from environmental and cultural damage. Therefore, this paper explores the structural issues within tourism in a capitalist context to suggest the incompatibility of sustainable tourism and growth.

Subak is a traditional cooperative social system that controls the water needed for the functioning of rice farming in Bali. For the subak to function, it is necessary for the subak to receive sufficient water and land to perform ceremonies and farm rice. Subak has been

recognised as a world cultural heritage site by UNESCO due to its manifestation of the *Tri Hita Karana* principles, Bali's foundational philosophy guiding everyday life. Therefore, subak is an important institution to study, where this dissertation will identify how the structural production of waste and inequality have negatively affected subak. In turn, this will shed light on the discourses surrounding sustainable tourism and growth.

Part one begins with reviewing the discourse surrounding the reconciliation of tourism growth and sustainable tourism. Secondly, I establish tourism's role in sustaining capitalism, and describe how tourism becomes commodified which has subsequently caused the production of waste and inequality. Thirdly, I define structural violence and its relation to the tourism industry. The literature review ends with a background description of tourism in Bali and a full description of subak.

Part two will identify the existence of inequality and waste in Bali stemming from the tourism industry and its effects on subak. The research section is split into two parts: the production of inequality and the production of waste. The production of inequality has cemented unequal power and income relations between the tourist industry and local communities. The power and influence of the tourism industry has led to the dispossession of subak land either by force or by the limiting of economic options in pursuing subak as an occupation. Furthermore, inequalities in power have meant the tourism industry has enjoyed an unequal distribution in Bali's water resources, where the water demands of the tourism industry has depleted Bali's water resources, thus preventing the functioning of subak. Tourism's production of waste has contributed significantly to Bali's current water crisis, preventing essential functionings of subaks across Bali. Furthermore, tourism's

pollution and waste has contributed to the increasing costs of subak farming which has led to subak farming being an unviable occupation, thus causing the decrease in subaks across Bali.

Part three will discuss what gives the production of inequality and waste in the tourism industry its structural feature. Tourism is not only a capitalist practice but also holds a central role in sustaining capitalism. The circulation of tourism-as-capital generates structural violence in which its value is harnessed later as a source of value for further tourism developments. This paper will focus on two foundational forms of inequality which have fed into the structural nature of inequality produced by the tourism industry: unequal terms of exchange and historical uneven geographical developments. Subsequently, I focus on three essential components of capitalist tourism that has perpetuated the structural production of waste: infrastructure and its related transport, branding and marketing, and the case of food. The paper then discusses how modernisation theory and the advocacy for sustainable tourism as a fix to the consequences of growth fails to properly address and quantify the cultural and environmental degradation as a result of structural violence affecting Bali's subak system.

Overall, this paper argues the structural nature of inequality and waste within capitalist tourism, exemplified through the case study of subak, suggests the incompatibility of sustainability goals within tourism and growth.

Part One: Literature Review

1.1) Sustainable Tourism Development

The term 'sustainable tourism development' appeared following the Earth Summit held in Rio De Janeiro in 1992 where tourism was emphasised as a vehicle to realise the goals of sustainable development (Hunter 1995). Sustainable tourism has remained a mainstream term in reconciling the damaging effects of growth, where the 2030 UN agenda for Sustainable Development Goals (SDG) target 8.9 aims to "devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products" (UN 2022). Furthermore, 2017 was labelled the year of 'Sustainable Tourism for Development' by the United Nations where tourism was branded as a crucial sector to contribute to the three recognised pillars of sustainable development: economic, social, and environmental (UNWTO 2017). This paper will use the World Tourism Organization (UNWTO) definition of sustainable tourism, defined as "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities" (UNWTO 2022).

The achievement of sustainable tourism is often centred around the emphasis on market-oriented approaches to achieve growth alongside addressing environmental and social concerns. For example, the Secretary-General of the UNWTO said the 2030 SDG's "sets the path that we all must embrace. ... the private sector, which is the key player in tourism, ... is beginning to recognise that the SDGs offer true business opportunities as sustainable business operations can spur competitiveness and increase profit" (UNWTO and UNDP

2017, p. 6–7). It is clear the UNWTO maintains this position following the severe economic hit to the tourism industry during the covid-19 pandemic, where the UNWTO calls for ‘green growth’ in its pursuit for sustainable tourism development (UNWTO 2020). Whilst the term *green* recognises the need to incorporate more ecologically sustainable values into growth, the pursuit of growth is nevertheless seen as a priority alongside sustainability goals, where the private sector is emphasised as a key actor in fulfilling aims of green growth and sustainable tourism development.

However, the concept of sustainable tourism development is criticised due to the seemingly incompatible nature of growth and sustainability. The concept contains an oxymoronic base as the term ‘development’ emphasises human use for human need whereas ‘sustainable’ infers a form of limits (Higgins-Desbiolles 2018). There has also been extensive research on whether economic growth can be decoupled from its damaging environmental impacts it often causes. For instance, Ward’s et al. (2016) influential paper concludes GDP growth cannot be decoupled from growth in material and energy use, therefore GDP growth cannot be sustained indefinitely without the harmful use of finite resources. Explaining tourism in the context of its role in sustaining capitalism provides a clearer picture of why the prioritisation of growth may be incompatible with sustainability.

Despite all the growing literature on sustainable tourism, the establishment of sustainability indicators, and the formation of transnational tourism organisations, the progress towards a more sustainable tourism sector has been minimal (Buckley 2012). Whilst from an economic perspective the large amounts of income sourced from the tourist industry would be seen as a success, the emergence of anti-tourist protests suggests the social unsustainability of

tourism and worsening environmental indicators, such as increasing tourism global greenhouse emissions, suggest tourism's environmental unsustainability (WMO 2021; Sharpley 2020). Furthermore, the current form of sustainable tourism even seems to be economically unsustainable with more countries becoming economically dependent on tourism, thus contradicting a special focus on development aiming to achieve self-reliance for countries (Holzner 2011).

This paper will be focusing on how structural violence stemming from the tourism industry has harmed the subak system, a culturally significant and sustainable practice. The structural violence of the tourism industry suggests that when growth remains a priority in tourism development, sustainability is unachievable.

1.2) Tourism-as-Capital

Marx (1973) identifies capitalism's central contradiction: the capitalist's desire to extract profit from the system and the need for sufficient capital to be transferred to the workers in order for production to be consumed. As capitalists extract labours' surplus value, meaning workers are paid less than what they produce and therefore are unable, on aggregate, to pay for what they have produced; overproduction, economic stagnation and ultimately the self-destruction of capitalism will occur. However, subsequently it is argued capitalism is able to cure this overproduction through economic growth and the continued expansion of capitalism (Fletcher and Neves 2012). Specifically, academics have said that through spatial and temporal fixes excess capital can be reabsorbed in the system, thus preventing (or forestalling) an overproduction crisis (Harvey 1989).

Spatial fixes refer to the export of capital into new geographical locations where the capital can be reinvested in new developments. International tourism can be seen as to provide spatial fixes due to its ability to bring capital to new geographical locations which are usually underdeveloped and therefore can easily absorb the excess capital (Fletcher 2009).

Temporal fixes refer to the displacement of excess capital into areas which can bring future returns by either investing in businesses that will create profit in the future or by reducing the turnover time of the money invested into the business. For example, a tourist activity such as white-water rafting is entirely consumed after finishing the activity, where it must then be purchased again to be re-experienced (ibid.). Therefore, tourist growth in general can be explained as a means for capitalism to find outlets for excess capital to prevent overproduction, thus simultaneously sustaining and expanding global capitalism.

To understand tourism-as-capital, it must be made clear how tourism undergoes capitalist commodification. The commodification of tourism creates tourism products which are turned into circulating exchange and thus capital. The commodification of tourism undergoes six central principles (Castree 2003):

1) **Privatisation:** the assignation of legal title which gives exclusive rights of the owner to “dispose of that which is named by the title as they wish” (Castree 2003, p.279). In tourist destinations, this can be seen through the ownership of facilities by tourist actors.

2) **Alienability:** the physical and moral separation of a given commodity or specific class of commodity to be separated from the seller (ibid.). As tourism products are often

landscapes, cultural/natural phenomenon, or the “sellers” themselves, it is less clear how alienation occurs. Büscher and Fletcher (2017) argue the derivatives of products such as postcards, names and miniatures are alienable although these do not necessarily impact the tourism product they are derived from. Furthermore, the experiences created through the product of tourism-labour harbour alienable elements in their exchange.

3) **Individuation:** “the representational and physical act of separating a specific thing or entity from its supporting context. This involves putting legal and material boundaries around phenomena so that they can be bought, sold, and used by equally ‘bounded’ individuals, groups or institutions” (Castree 2003, p.280). This process can be easily seen when tourists are charged a fee to enter an enclosed, privatised landscape such as a waterfall. Furthermore, this can also be seen in the individualisation of a specific culture where the individuals and specifics that constitute the product must be delineated, refined, and abstracted from their complex reality, where they are presented in an essentialised form that can be circulated as a generic commodified tourism category (Büscher and Fletcher 2017).

4) **Abstraction:** “a process whereby the qualitative specificity of any individualised thing... is assimilated to the qualitative homogeneity of a broader type or process” (Castree 2003, p.281). This process follows on from the individuation of products, where abstraction further divorces the tourism product from its supporting reality by generalising it within a class of products in which one can stand in for another (Büscher and Fletcher 2017).

5) **Valuation:** A process that transforms intrinsic value into labour values and use value into exchange value. For example, intrinsic and use values such as driving a vehicle, cooking food, or making a bed are transformed into monetary exchange value within the tourism market (ibid.)

6) **Displacement:** “something appearing, phenomenally, as something other than itself” or when “one set of phenomena manifesting themselves in a way that, paradoxically, occludes them” (Castree 2003, p.282). This results in commodities concealing an intertwined process which systematically harms workers and the environment. In what Büscher and Fletcher (2017) call a “tourism bubble”, displacement insulates tourists from the complex, harmful realities of the products they consume due to the concealment of the actual inputs (labour, land etc) in the tourism process.

Through these six processes, tourism becomes commodified, thus, generating value from tourism products which circulate to become a dynamic process whereby resources are reinvested to generate more resources. In this way, tourism becomes capital and the mobilisation of tourism resources into a broader circulation of value serves to simultaneously sustain and expand the tourism industry and global capitalism. The next section will define structural violence which occurs due to the commodification of tourism.

1.3) Structural Violence

This paper will follow the theoretical framework of Bram Büscher and Robert Fletcher’s (2017) influential work on the occurrence of structural violence as a result of the

commodification of tourism. Whilst the role that structural violence plays in the tourism industry has been theorised, the paper aims to extensively explore tourism's structural violence in practice. In this sense, the term *structural* violence moves away from violence as the direct intent to damage someone or something but instead considers violence in a broader sense. Nordstrom (2004, p.61) explains that violence is more than the initial physical harm to people, 'violence is employed to create political acquiescence; it is intended to create terror, and thus political inertia; it is intended to create hierarchies of domination and submission based on the control of force'. In this sense, *structural* violence can be defined as violence that is inherent to capitalist societies in that whilst no individual is directly responsible for this violence, many people contribute indirectly to it. This is to say that the actions and inactions causing indirect suffering are a form of structural violence (Tyner 2016).

Global capitalism has fed into both direct and structural forms of violence (Harvey 2006). As tourism is a capitalist practice at its core, tourism itself can be viewed as 'a product of structural violence inhering in the uneven development leading to the economic and social difference that forms the basis for most of the international tourism industry' (Büscher and Fletcher 2017). However, simultaneously, tourism often produces forms of structural violence through the exploitation of the local environment and people as the basis of capital accumulation repatriated elsewhere (Mowforth and Munt 2003). Therefore, in the process of tourism commodification, structural violence arises. Büsher and Fletcher (2017) identify a key form of violence named 'destructive creation', whereby further opportunities for the development of tourism capital emerge through harnessing the value created out of the structural violence inherent in the capitalist system.

Büscher and Fletcher (2017) identify three main forms of structural violence stemming from the tourism industry: the production of waste, inequality, and spaces of exception. This paper will focus on the production of waste and inequality in Bali. Whilst these forms of structural violence are not solely features of tourism, they have certain features due to their relation to tourism. This paper aims to examine how these forms of structural violence take place in Bali, how this has affected Bali's subak system, and what this suggests for the discourse surrounding the incompatibility of sustainable tourism and growth. The next section will provide an overview of tourism development in Bali, where I will subsequently focus on Bali's culturally significant subak system which has undergone constant change in the face of tourism growth.

1.4) Background of Tourism in Bali

Following the independence of Indonesia in 1949, President Sukarno took power and began to transform Bali into an island for 'cultural tourism'. In Sukarno's era, Bali was declared its own province within Indonesia, in which Balinese leaders began to view tourism as a key element in Bali's development (Vickers 2011). It then became clear at the national level the potential tourism planning held within Bali, where tourist development in the form of 'cultural tourism' was then planned at the national level. However, when Sukarno was overthrown by Suharto in 1965, the 'New Order' had a more internationalist view to development, where capitalist institutions were created (Schwarz 1997). This marked the beginnings of mass tourism in Bali.

The first Five-Year Development Plan was made in 1969 which emphasised international tourism as a vector for Indonesia's economic development (Korb 1999). As Bali still maintained its image as an 'exotic paradise' during its colonial era, Bali was made Indonesia's tourist gateway (Minca 2000). Subsequently, the Indonesian government commissioned the French firm SCETO to produce the 'Master Plan for the Development of Tourism in Bali' which was financed and implemented by the United Nations Development Programme and World Bank in 1974 (Wall 1996). This plan built a luxury complex of hotels in Nusa Dua and built the infrastructure to connect Nusa Dua to the major attractions of the island. Following the presidential endorsement of the Master Plan, tourism was cemented as a key pillar for Bali's economy, second only to agriculture (Pickel-Chevalier 2018). However, during this era of tourism development, Balinese authorities had relatively little participation in major tourism projects, where in the case of the 'Master Plan', Balinese officials were not consulted by the Indonesian government (ibid.).

The capital-intensive tourism development projects from Jakarta and international firms had benefits for Bali. At the end of the 'New Order' era, tourism was estimated to contribute 2/3 of Bali's GDP and absorbed 60% of the work force (Pickel-Chevalier 2018). However, the growing influence of foreign actors in comparison to Balinese actors became a matter of concern as the economic benefits became unevenly distributed (MacRae 2010). Following the implementation of "mega projects" funded by foreign and Jakarta based investors, several controversial headlines on *Bali Post* were made signalling the discontent from the Balinese (Picard 2013). The increasing influence foreign investors had on Bali caused an increased sensitivity to issues that may be deemed harmful to Bali's religion as these tourist projects often infringed upon the exploitation of special religious ceremonies

(Pickel-Chevalier 2018). Furthermore, the negative environmental impacts of these tourist projects began to show where local communities reported increased air and water pollution, water and electricity shortages, traffic congestion and crime (Chong 2020).

Following the Asian financial crisis in 1997, Suharto's regime collapsed and the 'reformasi' period succeeded, where democracy became Indonesia's political structure. This era brought a revival of culture, religious, and ethnic identities alongside better protection of freedom of speech at a national level (Picard 2003). However, alongside democratisation came the surfacing of cultural tensions in Bali that have manifested under the 'New Order' era of increasing mass tourism (Nyman 2006). Tensions climaxed on the 12th of October 2002 when a bomb exploded in the tourist hotspot, Kuta. Tourist numbers dropped significantly and Bali's over-reliance on the tourist industry for their economy became clear (Picard 2009). In 2003, the World Bank, UNDP, and the USIAD issued a report that suggested a more sustainable model for Bali's tourism and economic development (Pickel-Chevalier 2018). This marked the start of discourse based on equality, environmental friendliness, and community participation; however, these reports were largely ignored, and economic recovery was once again based on the unbounded attraction of tourists into Bali through market liberalisation and global integration (MacRae 2005).

Furthermore, the break-down of the 'New Order' regime led to greater regional autonomy in Bali through decentralisation processes. This gave the Balinese population hopes of gaining control of the tourism industry which has been dominated by international tourism actors and Jakarta investors. However, decentralisation failed to give more power to Bali at the provincial level. Instead, power was distributed across eight districts and one

municipality, whereby these nine governments are made to compete for revenue streams through tourism development permits (Benge and Neef 2018). This has led to increased inter-regional conflicts and emphasised existing environmental, cultural, and social issues (Cole and Browne 2015). Furthermore, this led to more opportunities for rent-seeking local elites who utilised their political power for economic gain through acting as brokers for tourism development projects (Wardana 2015).

Tourism remains the most important industry for Bali's economy and holds significant value for Indonesia's economy. In 2015, 4,001,835 foreign tourists visited Bali which constituted 41.22% of total tourists visiting Indonesia (Bali Government Tourism Office 2016). In 2014, the 'trade, hotel and restaurant' sector representing industries directly linked to tourism contributed 31.35% to Bali GDP (Antara and Sumarniasih 2017). In 2015, the primary sector contributed 15.89% to Bali's GDP, the secondary sector contributed 15.72% to Bali's GDP and the tertiary sector, understood as services industries including tourism, contributed 68.28% to Bali's GDP (ibid.). In 2018, Bali's FDI came to US\$ 1 billion where in 2020, 93.2% of Bali's FDI went into the tertiary sector (ibid.). Furthermore, the number of hotels and hostels have increased from a total of 422 in 1981 to 2,700 in 2017 (Rimba et al. 2019).

In April 2020, The Indonesian Tourism Industry Association projected the loss of IDR 138.6 trillion (US\$9.01 billion) and the decline of 93.24% of total tourists coming to Bali due to Covid-19 (Citra 2021). Furthermore, despite calls for more sustainable forms of tourism, it is clear now Bali's tourist industry is aiming to recuperate economic losses quickly through encouraging mass tourism (Subadra and Hughes 2022). Thus, the continuous search for profit throughout economic recessions maintains the cyclical nature of tourism as capital.

The Balinese Hindu concept – *Tri Hita Karana* (THK), is foundational to governing Bali's way of life, and has been increasingly incorporated into Bali's sustainable tourism practices and policies. This Hindu concept refers to the harmonious relationship between the human world (*pawongan*), spiritual world (*parhyangan*), and environmental world (*palemahan*) and is viewed as a post-capitalist sustainable framework (Adityanandana and Gerber 2019; Roth and Sedana 2015). The THK philosophy can be seen in the culturally significant *subak* system which is the Balinese irrigation system central to enabling rice production and connecting communities together. However, *subak* is one aspect of Bali which has encountered difficulties with tourism. As a result of Bali's growing 'water crisis', the increasing conflicts in water distribution has left *subak* and the tourism industry contesting for the available water. In the next section, I will describe the *subak* system in detail, where I will subsequently examine how structural violence as a consequence of tourism commodification has affected Bali's *subak* system.

1.5) Subak

Balinese village life is organised through interconnected groups including ancestral lineages, small local governments, religious groups and *subaks* (Roth 2014). The *subak* irrigation system was first implemented in the year 882 in Bali, in which the Balinese government defines the *subak* system as 'a traditional organization for water and/or crops management at the farm level custom from socio-agricultural societies from Bali, characterized by religious and economical features, which have historical growth and continue to grow and develop in present times' (Budiasa et al. 2015, p.32). *Subak* is controlled through a

community-based structure which highlights the local socio-cultural importance of water in Bali and demonstrates the ability for the decentralised management of a common pool resource in a sustainable manner.

More than just a system for controlling the flow and distribution of water, the subak is central to religious and social ceremonies which are inseparable from the functioning of temples and neighbourhood units (Lorenzen and Lorenzen 2010). Through the practice of religious ceremonies, the subak management system respects the *parhyangan* aspect of *Tri Hita Karana* through the harmonisation of relations between humans and spirituality. The *pawongan* aspect of THK is harmonised through the contents of *awig-awig* which consists of rules that subak farmers must follow (Windia and Sedana 2016). Lastly, the *palemahan* aspect of THK is fulfilled through the sustainable one inlet one outlet system in subak which harmonises people and nature (ibid.). For subak to function, it is necessary to receive sufficient water and land for each *sawah* (rice field) to grow crops and maintain the harmonisation of THK principles. This paper will examine how the structural production of waste and inequality have restricted these essential resources and functioning of subak, thus causing economic and cultural harm.

Subak holds significant international and local value and has been upheld as a sustainable practice that has been carried on for centuries. Subak's recognition as a world heritage site by UNESCO (2012), due to its manifestation of Bali's foundational philosophy *Tri Hita Karana*, makes the subak an important institution to study regarding its tensions with capitalist growth. Studying a sustainable practice within a capitalist society will shed light on

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the pervasiveness of unbounded tourism growth and its environmental, cultural, and economic effects.

Part Two: Research

This dissertation aims to establish the production of waste and inequality as a structural feature of the tourism industry and evaluate its effects on Bali's subak. This will aid the discourse surrounding the incompatibility of sustainable tourism and growth as described above. In part three I will discuss what makes the production of inequality and waste a structural feature of tourism.

2.1) Methodology

My research involves the analysis of mainly secondary sources to establish the production of inequality and waste in Bali and its effects on subak. The analysis of secondary sources is used to back up the theoretical discussion on the structural nature of the production of inequality and waste. I was interested in undertaking research with subak farmers that could offer insights into their perceptions of how subak functions and the effects of tourism on subak through a small-scale primary research project.

This small-scale primary research was conducted through open-ended questionnaires that were sent to subak farmers in Bali (Appendix 1). Questionnaires were distributed across subaks in Bali through a colleague in which I received six replies. When distributing and collecting the questionnaires, it was important to keep the farmers' identities anonymous, and to make sure the farmers responded without any pressure or worries about government officials reading their responses to prevent bias. Therefore, their responses were written and sent directly to my telephone, where I then translated the answers from

Indonesian to English. Although only a few questionnaires were received, the answers were useful to gain insights into subak farmers' perceptions of tourists and tourism effects post covid-19 to ascertain the extent to which they endorsed data from the secondary sources. Their responses stimulated my interest in conducting future research with subak farmers to explore the possibility of other approaches to overcome the problems of inequality and waste, based on the subak values of farmers in Bali.

2.2) The Production of Inequality

This chapter describes how forms of inequality arising directly from the tourism industry have affected Bali's subak. I begin with examining the inequalities present during the dispossession of subak land by tourism actors. After describing the power imbalances that are present in general cases of dispossession, I describe the political-economic landscape of Indonesia during the 'New Order' regime which has been characterised by its overt abuse of elite power. I then use the case study of Tirta Wahana Bali Inter-nasional to explore the unequal power dynamics in a highly contested project occurring today, which reflects the tourism industry's power to dispossess local communities and subak land. Lastly, I examine how inequalities in income have spurred Bali's water crisis, where subak farmers have been increasingly excluded from accessing water, a crucial resource necessary for the functioning of subak.

The inequalities between residents and tourism actors is seen through the dispossession of local communities from their land to create space for tourism developments. As stated

earlier, spatial and temporal fixes are necessary to find new outlets for excess capital to prevent an overaccumulation crisis. To find new outlets, the dispossession of land is necessary to create new spaces for development (Harvey 2003). In addition, it is important to note that instances of dispossession are not limited to extreme cases where the use of force is utilised (Hart 2006). Devine and Ojeda (2017) argue that processes of socio-spatial reconfigurations stemming from unequal power relations result in the limiting of options for local communities to freely decide over their livelihood and forms of life. This is readily seen in tourism sites, whereby the privatisation of land or resources such as water and increasing land prices exert pressure on local communities, as described below. In turn, these local communities can be dispossessed of an object, their autonomy, cultural practices, and land use (ibid.). The unequal distributions of power within the tourism industry, in which local communities are subjected to the influence of tourism actors, form the basis of the current changes in land-use and water-use, whereby subak is negatively affected.

Throughout Indonesia's 'New Order' regime, Bali's tourism industry was organised through Indonesia's central government, whereby the Balinese population had little to no say in how the tourism industry should be ran. This era was characterised by invasive forms of development, where the influence of foreign investors trumped the interests of local communities (Mudana et al. 2018). To obtain the land needed for tourism developments, subak famers who were not willing to sell their land were put under unjust pressure by both investors who were often close associates of President Soharito and government officials (MacRae 2010). This led to the forced eviction of Balinese landowners in the name of tourism development and Indonesia's economic growth (Mudana et al. 2018). Subsequently it has been estimated that 85% of the tourism industry was owned by non-Balinese actors in

2010 (MacRae 2010). Furthermore, when focusing on 4 and 5 star-hotels, 51% of the revenue was leaked out of Bali's economy in 2014 (Suryawardani et al. 2014). This indicates the unequal power dynamics within Bali's tourism industry, allowing tourism investors to develop into subak territory in a manner which has neglected the needs of subak.

The unequal distributions of power and income between the tourism industry and Balinese communities in favour of the former is exemplified through the current Tirta Wahana Bali Inter-nasional (TWBI) 'mega project' in Benoa Bay. The TWBI project has shown that practices of collusion between governments and economic elites are still present. In 2012, Tomy Winata, a powerful Indonesian tycoon, began this project aiming to build a 838-hectare luxury resort in Benoa Bay (Hikmawan and Hidayat 2016). The TWBI has been criticised based on its disregard for Bali's *Tri Hita Karana* principles due to the project's incompatibility with the Hindu 1994 Bhisama decree's prohibition of large-scale commercial developments within areas of sacred temples (Wright 2016). In response to these concerns, the feasibility report stated 'vocational training and employment opportunities can balance these cultural impacts' (Warren and Wardana 2018, p.115). Through financial power Winata was able to begin the project on a legal basis by influencing political elites. Winata funded President Yudhoyono's campaign and the current Indonesian President's campaign and has claimed that he has input IDR 1 trillion (£55.8 million) into the TWBI project forward, leading to the favourable governmental decision that gave legality to this damaging project (ibid.). For example, Yudhoyono altered the spatial planning laws of Benoa Bay from a conservation zone into a utilisation zone, thus, allowing this project to proceed (ibid.). It is clear this project has already contributed to Bali's water crisis due to freshwater salination, which in turn has had a negative impact on subak as I will explain below (Kartika 2021). Overall, the

unequal power dynamics have meant non-Balinese economic elites have benefited the most at the expense of Bali's environment, culture, and socio-economic harmony.

Furthermore, the unequal power relations within Bali have limited the freedoms of those in subak to freely decide their land-use, a form of dispossession as described by Devine and Ojeda (2017). As land taxes are based on the market value of a piece of land rather than its use value, the encroachment of high-value tourism related industries into subak territory have increased the taxes on subak land to the extent it has become unaffordable for many farmers (Benge and Neef 2018). For example, the development of the Tibet dam for predominantly tourism related needs caused rice field taxes of both subak Dukah and subak Asah Uma to increase from IDR 2.5m (£140) per 100m² to IDR 10m (£558) per 100m² between the years 2011 to 2015 (Budiasa et al. 2015). The resulting dispossession of land from this government led project led to the loss of 31-hectares of subak land (ibid.). In addition, respondents to the questionnaires noted the encroachment of hotels in agricultural subak land as the biggest threat for the future of subak. One subak farmer in Kuta responded: "The conversion of agricultural land into housing and hotels will reduce agricultural land and the subak system will only be a story". Therefore, the encroachment of tourism related activities into agricultural areas have pushed subak famers out of their land, putting the future of subak in danger.

In addition, the uneven distribution of income has generated further inequalities in access to water, which in turn have emphasised Bali's water crisis. The national 'New Water Law' established in 2004 states that governments must respect individual basic needs and irrigation rights in cases where it does not conflict with state interests (Lorenzen and

Lorenzen 2008). However, as the promotion of tourism growth is a high state priority due to the economy's dependence on this industry, it is often the case the needs of individuals and agriculture become overlooked. The privatisation of Bali's water supply can be attributed to Bali's general shift towards a market economy based on a libertarian ethic of non-intervention (Lorenzen and Lorenzen 2010). This has led to 'traditional' water users, such as those in subak, having to function within a system which prioritises the economic value of water over its cultural value, alongside a regime which favours market freedom over equality of access (Benge and Neef 2018). Subsequently, the tourist industry is the largest consumer of Bali's public water supply, consuming 65% of the water resources in 2010 (Mostafanezhad et al. 2016). The inequalities in income between tourism actors and local communities have been foundational to the production of water inequity in Bali. As tourism actors have sufficient capital to pay for a public supply of water whereas local communities have relatively lower means to pay for public water, the tourism industry have enjoyed an inequitable supply of water.

Bali's water crisis has increased the competition for water, which has been particularly challenging for subak due to the essential role water holds in growing rice crops and performing ceremonial rituals. In a study conducted by Strauß (2011), subak farmers reported a problematic supply of water due to the power dynamics within the competition for water. One subak member stated "I did not harvest anything... The problem here is the water source at the Wongan: the water is distributed for other purposes first, after that it is dry and there is nothing left for us" (Strauß 2011, p.72). Subak members referred directly to the privatisation of water as a direct cause to the subaks loss of water in the Badung area, where the privatisation of a once open access water resource for subak irrigation is now

used predominately for the large-scale Nusa Dua hotel resort (ibid.). The lack of water has led to the inability of performing rituals, thus, directly harming the *Tri Hita Karana* principles of subak. The loss of subak land, the community-based structure which governs village life, and the subsequent harm to THK principles are not addressed through the transition towards a service-based economy.

Overall, the unequal power relations between the tourism industry and local communities stemming from inequalities in income and Bali's dependence on the tourism industry for economic growth have resulted in the loss of subak land. Tourism developers have long been able to manipulate the legal landscape due to their power and influence. In addition, as Bali is dependent on tourism to fuel its economic growth, the needs of the tourism industry trump the needs of local communities where the environmental and cultural damage caused by the tourism industry are justified by the economic opportunities these developments will bring. The constant growth of the tourism industry has resulted in the dispossession of subak land, either by force or by crowding out, and has contributed significantly to Bali's water crises, thus preventing essential functionings of subak and causing cultural harm. In the discussion section, I will examine the structural features of the inequality stemming from the tourism industry.

2.3) The Production of Waste

In this chapter, I will describe the data that highlights tourism's production of waste in Bali before exploring how this can be viewed as a structural issue in the discussion section. This chapter begins with the tourism industry's dependence on transport and its associated

travel infrastructure as a root cause of tourism's production of waste. Secondly, I show how the essential functions of hotels and restaurants highlight one example of how the tourism industry produces waste. Subsequently, I examine how the production of waste from tourism has directly contributed to Bali's water crisis, thus preventing necessary functions of subak to uphold culturally significant *Tri Hita Karana* principles. Lastly, I explain how the production of waste has led to subak farming being an unviable occupation for many, thus leading to the decrease of subak farmers and land.

The tourist industry's dependence on travel infrastructure and its associated forms of transportation demonstrates the production of waste stemming from tourism (Büscher and Fletcher 2017). With transport being responsible for around 23% of total energy related CO₂ emissions world-wide in 2014, with a projected 100% increase by 2050, its damage to climate change will continue to be dramatic (Sims et al. 2014). Tourism's reliance on airlines, ships, cars, and travel infrastructure causes the production of waste, environmental degradation, and climate change. These environmentally damaging forms of travel perpetuated by the tourism industry are especially problematic for agricultural practices and has already affected subak (Kurukulasuriya and Rosenthal 2013; Sukartini and Solihin 2013). For example, a subak farmer responded to the questionnaire stating, "rainfall is decreasing because of greenhouse emissions increasing, which has caused decreased groundwater and dryness". Whilst the factors exacerbating climate change include much more than tourism and travel, tourism is a significant contributor to global climate change, contributing 8% of total carbon emissions every year, where 49% of tourism's carbon emissions stem from travel (Lenzen et al. 2018). Therefore, the increase in use of transport

and infrastructure in a growing tourism industry has produced waste, thus, contributing to climate change and resulting in the decrease in crop yields for subak farmers.

Furthermore, the production of waste in tourism is illustrated by hotels and restaurants that serve the needs of tourists. The influx of tourists into Bali has increased the pressures on the local environment. Widyarsana and Agustina (2020) carried out research in Nusa Penida studying the generation and composition of the district's waste. In Nusa Penida, tourist activities revolve around restaurants, beaches, and lodges. The study found that 'food waste' was by far the most significant contributor to Nusa Penida's waste composing 61.6% of total waste (Widyarsana and Agustina 2020). The study attributed this result to the "high culinary activities" on the island (Widyarsana and Agustina 2020, p.3). Food waste has contributed to Bali's water crisis and has subsequently impacted subak, in which I will expand on below. Therefore, as one essential functioning of tourist destinations is to serve the needs of tourists through sufficient provision of food, the tourist industry under the current growth-orientated framework results in the production of waste.

The production of waste has contributed to the growing water crisis in Bali, which in turn has damaged the subak system. With unbounded tourism and economic growth, there has been increasing pressures on Bali's water resources (Chapagain et al. 2022). Furthermore, it has been estimated that from the year 2010, water consumption will increase by 70% by 2025, suggesting increasing water pressures on an already overstretched water supply (Strauß 2011; Rai et al. 2015). The infiltration of pollution into freshwater results in less consumable water, therefore, reducing the overall water supply in Bali. There are nine different water companies known as PDAM (Perusahaan Daerah Air Minum) working in

different districts that supply consumers (households and industries) which are semi-state owned, semi-private businesses (Cole et al. 2021). In 2017, PDAM in Denpasar announced that the production capacity was short 398 litres/second in relation to the demand for water (PDAM 2022). Furthermore, water tables in tourist heavy areas such as Sanur and Kuta have lowered, thus signalling the overexploitation of water in Bali by tourists (Strauß 2011).

Chapagain's et al. (2022) study highlights the major impact waste from tourism has on water pollution in Bali, thus contributing to the water crisis. The study analysed the links between water pollution and various economic activities in 2007 using biochemical oxygen demand (BOD) as a proxy for water quality. The study focuses on both the direct and indirect emissions of each economic sector. Direct emissions are defined as "water pollutants that are directly discharged by a sector in producing the products required to satisfy all forms of demand" (ibid. p.5). Whereas indirect emissions are "water pollutants that are discharged by a sector and other sectors to produce the inputs it requires" (ibid. p.5). The study found that in total 246.9 kt of BOD was released in the economy's production process. Sector 4 (Food, beverage, tobacco, & coffee industries) was the second biggest emitter of BOD direct emissions (1.9kt), with sector 2 (Livestock & poultry) being the largest emitter, releasing 237 kt. In terms of direct BOD's, sector 14 (Hotels & restaurants) contributions were negligible. However, when examining sector 14's indirect emissions it is clear its impact on Bali's water pollution is high, where it emits 30% of total indirect emissions. Champagain (2022 p.8) concludes sector 14 (tourism sector) as a significant pollutant inducer, where their close connections to Bali's other sectors causes a 'significant amount of the economy's water pollutants'. Therefore, the increasing demands of the tourism industry has increased the

production of associated industries such as agriculture, which in turn has increased water pollution, exacerbating Bali's water crisis.

Therefore, the production of waste in Bali's tourism industry has had a direct negative affect on Bali's subak system, as its contribution to the water crisis had led to less available water for subak. Water is an essential component for the functioning of subak and the *Tri Hita Karana* principles that underlie them (Windia et al. 2005). The diminishing supply of water in Bali due to the water crisis threatens the economic viability of subak due to the decreased ability to grow the same number of crops each year, causing farmers having to abandon subak rice farming (Strauß 2011). Furthermore, diminished water supply has led to the inability to perform rituals necessary to satisfy the *parhyangan* aspect of THK (ibid.). Subak is also an essential institution for village life as it governs disputes within and between villages and organises important cultural/spiritual practices. Therefore, whilst the tourism industry has replaced farming jobs with jobs in the service industry and has thus lessened the economic impact, the encroachment of the tourism industry has failed to lessen the cultural and social impact due to the loss of subak.

Furthermore, the pollution of water from tourism's waste has caused increased costs for subak farmers. With many subaks now being surrounded by tourist industries, waste has increasingly been polluting the surrounding subaks either through river streams or direct littering (Sunarta et al. 2019). In Cole and Browne's (2015) study, conducted interviews with subak famers found that pollution in the paddy fields forced subak farmers to spend more working hours cleaning the fields. Furthermore, the farmers reported that the pollution in subaks caused more incidences of skin irritations that rendered them unable to work for a

period of time (ibid.). In addition, subak farmers reported in the questionnaires that waste from tourism was a key issue in the functioning of rice farming. One subak farmer in Badung, a concentrated tourist area, reported “The large amount of garbage that is dumped arbitrarily, disturbing the waterways” around rice fields which has “interfered [with] the growth of rice crops” in response to the effects of tourism on subak. Therefore, the increase in waste has disrupted subak farming as a viable occupation, pushing farmers, especially the younger generation, to tourism related jobs (Rahmi and Setiawan 2020).

Overall, I have explained the data that has established the production of waste stemming from the tourism industry. Looking at essential components of the tourism industry: travel, hotels, and restaurants, I have identified how the production of waste stemming directly from the tourism industry has occurred. The empirical data suggests that the increasing amount of waste and water pollution stemming from the tourism industry has contributed significantly to the water crisis, resulting in less water available for subak to function. Importantly, this has caused a major negative impact on Bali’s culture, due to the inability to perform necessary tasks to fulfil elements of the THK. In addition, tourism’s issue of waste has harmed rice crops, blocked water ways, and increased costs to farming, disrupting subak as a viable occupation. In the discussion section, I will explore how the production of waste can be viewed as a structural issue.

Part Three: Discussion

I will now discuss the production of inequalities and waste as being a structural feature of tourism within a capitalist context. As explained above, tourism is not only a capitalist practice, but also a central function in which capitalism sustains itself. Through the commodification of tourism, tourism becomes capital when the value generated begins to circulate to become a dynamic process whereby resources are invested to generate more resources (Büscher and Fletcher 2017). I will discuss how the production and exploitation of structural violence (inequality and waste) is an essential component of what gives tourism-as-capital its structural nature. This entails that the tourism industry's production of inequality and waste exacerbates these issues through the further exploitation of local people's and environments as the basis of capital accumulation repatriated elsewhere (Mowforth and Munt 2003). As a result, this creates further opportunities for the development of tourism capital, where the structural violence of the capitalist practice is harnessed as a source of value for further accumulation. Therefore, these forms of violence are structural in nature as the production of these forms of violence are necessary to maintain tourism-as-capital. It is important to note that the issues of structural violence are intimately linked with the tourism industry's pursuit for growth, where the constant need to expand perpetrates this cycle of structural violence, which has ultimately contributed significantly to the degradation of Bali's subak. After examining the structural nature of waste and inequality, I will discuss two discourses that have attempted to justify and uplift these issues: modernisation theory and sustainable tourism.

First, this paper does not aim to portray capitalism as a homogenous entity with autonomous initiative and will. Rather, Brockington et al. (2008) argue the current capitalist system is shaped by a coherent 'transnational capitalist class' who aim to perpetuate capitalism due to the benefits of promoting economic growth within the consumerist world. In addition, as the 'transnational capitalist class' largely directs the tourism industry, it is possible to analyse tourism growth from a capitalist perspective whilst at the same time not giving false agency to capitalism (Fletcher 2011).

3.1) Structural Production of Inequality

This section explores two foundational forms of inequality that have fuelled the cycle of structural inequality stemming from Bali's tourism industry. Just the same as any form of commodity production, tourism produces inequalities. Simultaneously, tourism depends upon inequalities to function, giving inequality its structural nature within the tourism industry where these inequalities have negatively impacted subak. I begin with the inequalities that have developed as an outcome of historical uneven geographical developments. I argue tourism has been utilised by Bali and other developing countries to narrow the gap caused by uneven patterns of colonial expansions, thus, entering into new relationships of dependency in the post-colonial world. The reliance on the tourism industry has generated power inequalities between tourism actors and local communities, where the needs of the former trump the later. In addition, I discuss the role of branding in the harnessing of value generated by the structural inequality of the tourism industry. Secondly, I examine the appropriation of workers labour as a basis for value creation that is

necessarily predicated on the unequal terms of exchange inherent within tourism exchanges as another example of the structural inequalities within the tourism industry.

The first form of inequality that has been foundational to the cycle of structural inequality is situated within the forms of unevenness or difference that are outcomes of historical capitalist uneven geographical developments (Harvey 2006). These general forms of difference are then 'rendered into modes of distinction through the commodification process' (Büscher and Fletcher 2017, p.658). This is an essential component of the tourism industry, as the differences of places are the very aspect in which tourism is marketed (Borocz 1996). Places have economically developed in virtue of uneven geographical developments in the colonial era. Cities such as London and Paris are key tourist destinations today as they were more central nodes within the unequal patterns of colonial capitalist expansions and exploitations of colonial countries (Büscher and Fletcher 2017). However, former colonies, which were once subjugated economically to their colonial power, have often embraced the development of tourism as a vehicle to narrow the economic gap within the global capitalist economy dominated by more advanced industrial producers. Subsequently, in today's post-colonial landscape many countries have entered new relationships of dependency and unequal exchange, where 21/25 of the country's most dependent on tourism for their economy were British, Portuguese, or Spanish colonies (Higgins-Desbiolles 2009; Quartz 2019). Therefore, the inequalities based on the forms of unevenness stemming from historical capitalist developments have generated new relationships of economic dependency seen today in the tourism industry.

These new relationships of dependency are seen in Bali, where the promotion of tourism has been key to gain a toehold in the global economic order since the 'New Order'. Previously, Indonesia was under colonial rule from 1602-1949, where the Dutch were in control for the large majority of time (Schmutzer 1977). The Dutch policies implemented under colonial rule were extractive, designed to exploit Indonesia for Dutch gain. For example, the 'Culture system', implemented in 1830, forced Javanese farmers to cultivate export crops on their rice-land and sell these crops to the Dutch for a subsistence price where the Dutch resold these crops for substantial profits across Europe (Yazid 2014). This extractive regime left Indonesia's economy unstable, whereby Indonesia's adoption of the tourism industry has resulted in Bali's dependency on tourism for economic growth (Antara and Sumarniasih 2017). Ultimately, this has resulted in unequal relations of power within Bali, where the tourism industry's needs are prioritised over the needs of local communities. Therefore, the tourism industry has been sustained by generating value off the inequalities formed from historical uneven geographical developments, which in turn has generated further inequalities in the form of unequal relations of power. This simultaneous need for the tourism industry to generate inequalities whilst also depending on the unequal power relations to function gives it its structural nature.

The harnessing of value from existing inequalities that in turn generate further inequalities is also clearly seen within the development of Bali's water crisis and the inequalities suffered by local communities. As explained above, the inequalities in power between tourism actors and local communities have contributed to the abuse of Bali's water supplies whereby the demands of the tourism industry have significantly diminished Bali's freshwater (Strauß 2011). The subsequent water crisis has reproduced this cycle of

inequality, where it has deepened the limited access to water that subak and local communities have. Whilst tourist industries with more capital can afford to link private supplies of water or bore deep wells, those who have insufficient resources are forced to buy water from refilled water bottles which are unregulated, poor quality and increasing in price (Cole 2014). In subak, this cycle of inequality is experienced in the constant increase in land prices as a consequence of the tourism industries need for constant development into new areas (Sunarta et al. 2019). This entrenches the existing inequalities in income resulting in the inability of subak farmers to operate, thus causing the dispossession of subak land and further tourism developments. Therefore, the tourism industry has sustained itself through the exploitation of structural inequalities in income present within Bali's tourism industry.

Furthermore, the branding of places is done through the simultaneous differentiation and equalisation of places, where destinations distinguish themselves from other places within a standard commodified category of abstraction understood by tourists (Devine and Ojeda 2017). For example, the commodified category of safaris can be distinguished into both a drive through a public reserve or a private estate; both are understood as a safari, but both make for unequal experiences. As marketers make strategic decisions on the essentialisation of a place in terms of their commodified category, complex inequalities between these places in the abstraction commodification process are necessarily violated to prevent the complication of brand recognition for tourists (Büscher and Fletcher 2017). In turn, this results in contradictions that embody the structural inequalities surrounding income, race and gender. Whilst the appeal of Bali is expanding into a broader imagination, it is still often the case Bali is epitomized and marketed as an *exotic* island (Hobart 2011).

The common picture of bare-breasted women in Bali's rural areas has carried on from the Dutch colonial era to represent Bali as exotic (Pickel-Chevalier 2018). As a result, Bali has become subject to a 'tourist gaze' which fantasizes and reinforces colonial representations of Bali as a playground for tourists to enjoy, which minimises the damaging effects tourists have on the local area (Encounter 2005). Therefore, the branding of places based on the unequal results from the uneven developments of previous capitalist expansions has been utilised to generate value, thus circulating tourism-as-capital, causing the structural reproduction of these inequalities within Bali.

The unequal terms of exchange that give rise to the appropriation of workers' labour is a fundamental process in allowing tourism to generate value and sustain itself (Büscher and Fletcher 2017). The appropriation of labours surplus value leads to the social alienation of the labours' products by the owners of tourism capital. Viewing the tourism product as a certain experience, it must be the case that it is the worker's contribution to the tourism experience that is alienated in its commodification. This ranges from the labour performed in the creation of tourism infrastructure, to more abstract forms of 'emotional labour', referring to the selling of a particular emotional state that is conducive to provide tourists with the positive experience they seek (ibid.). Therefore, Hochschild (2003) argues that it is the workers' emotions that is most centrally alienated in tourism exchanges. The alienation of workers' labour needed for value creation is based on unequal terms of exchange. As the value of the tourism experience is derived from the difference between what tourists earn and what they pay, it follows that tourism workers are commonly paid far less than the tourists they serve (Büscher and Fletcher 2017). Subsequently, Robinson (2008) states that tourism is grounded in the cheap labour of tourism workers, where the division between

the rich and poor is taken for granted and instead tourism is viewed as a 'right', where the global society take advantage of these unequal relations. These unequal terms of exchange have been necessary to sustain tourism, where the relatively cheap labour in the tourism industry has fuelled the growth of tourism developments. Therefore, the alienation of tourism commodities predicated on unequal terms of exchange perpetuates the cycle of inequality within Bali which has placed the needs of the tourism industry above the needs of subak and local communities.

Overall, capital accumulation via tourism has harnessed the value from uneven geographical capitalist developments and unequal terms of exchange whilst simultaneously exacerbating these structural inequalities, thus generating further inequalities which have harmed Bali's subak. The tourism industry's reliance on inequalities to generate value and sustain itself makes these inequalities structural in nature.

3.2) Structural Production of Waste

In this section, I will explain how the tourism industry produces waste structurally in a way unique to the tourism industry through three examples: infrastructure and transport, the case of food, and branding and marketing. The structural production of waste can be understood through Marx's (1973) identification of capitalism's central contradiction where the capitalists' desire to extract profit and the need to transfer sufficient capital to the workforce is necessary to prevent an overproduction crisis. This feature of capitalism necessitates the function of economic growth to alleviate the overproduction crises, through the occurrence of spatial and temporal fixes (Harvey 1989). However, through the

prioritisation of economic growth the concern for environmental degradation is overshadowed. It is clear the development of tourism has been a central function in the way capitalism has found outlets for excess capital that could otherwise cause an overproduction crisis through the provision of spatial and temporal fixes. Furthermore, as shown above, the commodification of tourism has produced much waste within Bali.

One example of the tourism industry's structural production of waste resides within the fact tourism-as-capital necessarily involves the growth of infrastructure and transportation (Büscher and Fletcher 2017). The tourism industry's dependence on the creation of travel infrastructure simultaneously stimulates the development of this infrastructure and the related forms of transportation, causing substantial negative impacts on climate change and the environment in general as explained previously (Carrier and Macleod 2005). Stroebel (2014) argues that without the growth of infrastructure and transportation, tourism will not be able to function. Therefore, despite the widespread rhetoric of sustainability within tourism, it is not clear how the tourism industry can reduce their carbon footprint substantially through voluntary methods such as carbon offsets. This suggests that the only way to reach sustainable climate goals within tourism is to travel less. However, as the attraction of tourists is necessary to fuel the growth of the tourism industry, the effects of travel as a necessary component of tourism makes the production of waste a structural issue within a growth-orientated tourism industry.

Furthermore, the production of waste is not only a byproduct of tourism delivery but is also an essential component within this delivery itself. This is exemplified by the case of food. Within the 'host' and 'guest' dynamic, it is often the case that for the tourist to feel satisfied

with the experience they are buying, the 'host' must go over and above to fulfil this experience (Büscher and Fletcher 2017). In the case of food, this would entail the over preparation of food to the extent that providers will not run out, where the leftovers need to be discarded. This is a common reality in 'luxury' or 'all-inclusive' type resorts as well as restaurants which hold a central role in the tourism industry. Furthermore, the issue of waste is also clearly seen in 'sustainable' forms of tourism. For example, 'Bali Bike Baik', a cycling tour around Ubud operated by the 'The Authentic Ecological and Cultural Adventure Tour', provides unlimited breakfast and lunch for their daily tours (Bali Bike Baik 2022). As shown in the research section, food waste is a key issue in tourist areas, where the largest waste contributor to the region of Nusa Penida in Bali is food waste (Widyarsana and Agustina 2020). Therefore, the need to satisfy the tourists within the 'host' and 'guest' dynamic leads to the production of food waste as an essential component within the delivery of the tourist experience, resulting in the structural production of waste which has negatively affected the subak system.

Another example of the structural production of waste within the tourism industry is its reliance on branding and marketing which feeds into this structural process. The branding of tourism activities exacerbates the issues created by the industry's own production of waste, thereby sustaining the accumulation of tourism capital, and increasing tourism developments. This is shown by tourism branding generating value off the impacts of tourism waste elsewhere, a process named disaster tourism (Büscher and Fletcher 2017). Using 'Bali Bike Baik' as an example again, their website describes the tour as a way to "discover the REAL Bali" (Bali Bike Baik 2022, emphasis not added in). By advertising the 'real' Bali, this insinuates and consolidates the fact that in tourist heavy areas the Balinese

culture has adapted to accommodate the tourism economy and that the impacts of mass tourism have tarnished the Bali brand tourism actors are attempting to promote. Therefore, tourism actors can attract tourists who aim to experience the branded image of the 'real' Bali elsewhere, thus harnessing the value of the structural violence stemming from the tourism industry as a basis for further tourism development. This is a direct example of the structural nature of the production of waste, whereby the attraction of tourists to new destinations is bound to produce more waste, thus, contradictorily harming the 'real' Bali in a cycle of waste production.

However, it is important to question whether the production of waste is necessarily an inherent issue within tourism or whether waste management can make the issue of the structural production of waste redundant. The issue of waste has been given considerable consideration in the tourist industry. A common example of attempting to mitigate waste issues is the "Leave your towels on the railing" example, in which hotels have attempted to reduce the waste of water (Büscher and Fletcher 2017, p.660). Whilst these measures help reduce waste, these measures fail to address the structural causes of this issue. Firstly, these measures tend to 'greenwash' the issue of waste, in which the tourist industry can showcase their environmental consciousness to tourists. In turn, these measures which only minimally address issues of waste legitimise the growth of waste-producing practices in the tourism industry such as travel, hotel, and restaurant waste. Therefore, the structural production of waste is a clear phenomenon in Bali, whereby the tourist industry is then able to take advantage of the environmental damage in the process of disaster tourism.

Overall, the structural nature of the waste produced by the tourism industry is exemplified by the essential role transport, infrastructure, food, and branding holds in the delivery and sustaining of tourism. Tourism growth has played a central role in sustaining capitalism. Its generation of waste in which its value is later harnessed for further tourism developments exemplifies one avenue in which tourism has sustained capitalism and harmed Bali's subak system.

3.3) Modernisation Theory

To naturalise and therefore justify the dispossession of agricultural land in developing countries, modernisation proponents argue the linear development course leads to a natural decline in agriculture, such as subak, and a rise in service industries such as tourism (Rostow 1990). Within this theory, it is implied that the increase in economic growth will bring environmental and social fixes to society, thus benefitting those throughout all of society. In the case for environmental degradation and waste, ecological modernisation argues that as countries develop, technology will be able to overcome the damage of modernisation whilst rationalisation processes inherent in modernisation will offset environmental degradation (Mol and Spaargaren 2000). When examining the issue of income inequality, it is argued that social welfare schemes will be sufficient to minimise the impacts of inequality. Regarding the tensions and conflicts arising between traditional culture and social modernisation, modernisation theorists view this an inevitability, where the benefits of modernisation outweigh the value of the former (Liu and Xu 2021). The economic loss of decreasing agriculture can be quantified and addressed through the jobs and income an increase in service/tourism related jobs. Therefore, the decline in subak land

should be seen as a success story in that Bali has progressed into a later stage of development.

However, this Euro-centric view of linear development fails to give sufficient weight to culturally significant practices that come into conflict in the pursuit for modernisation as a westernised concept. Whilst a transition from agricultural practices (such as subak) to service-based industries (such as tourism) present economic benefits such as increased incomes, GDP, and FDI, modernisation theorists are unable to quantify the degradation of culturally significant practices that may be lost in this transition. As Zhu (2005) argues, modernisation is meaningless at the cost of destroying native culture. For Bali, the foundational principles of *Tri Hita Karana* have guided the harmonious relationship between humans, spirituality, and the environment and is a crucial component of how Balinese life is led. The embodiment of THK principles within the subak institution represent the value these THK principles have for village life. Therefore, whilst modernisation theorists may be able to justify the loss of agricultural and subak jobs by highlighting the increase in higher paid service jobs, modernisation theories cannot justify the irreversible damage to the cultural value of subak. In addition, the domination of foreign owners within tourism industries means much of the economic gains are leaked out of the local economy, where in 2010, 85% of the tourist industry were foreign owned, and in 2014, 51% of the revenue generated by 4 and 5-star hotels were leaked out of the economy (MacRae 2010; Suryawardani et al. 2014). Therefore, it is unclear how much the local Balinese gain economically in total.

3.4) Sustainable Tourism as a fix?

As a response to the harmful impacts of tourism, different forms of sustainable tourism have evolved over time. Fletcher and Neves (2012) observe that tourism is often advocated as a poverty reduction mechanism whilst also addressing issues of equality, environmental damage, and as a means to overcome periods of economic stagnation. The UN (2022) has been a major proponent of tourism and its fixes, reinforced by their Sustainable Development Goals with sustainable tourism included in their development agenda to ensure “prosperity for all” by 2030. Whilst perspectives differ, the dominant perspective in governments, tourism sectors, and transnational institutions is that growth is good, where ‘technological progress and the market mechanism could prevent scarcity and pollution constituting a substantial limitation on long-term economic growth’ (Perez-Carmona 2013, p.91). Criticisms against growth are often responded to by stating it is not growth that is the problem, but how growth is managed (Hickel and Kallis 2020). Therefore, an argument can be made that the tourism practised in Bali is not a true form of sustainable tourism, and that if it was truly sustainable, structural violence will not occur.

However, the issue with sustainable tourism being a fix is that it does not present a fix, but serves to reproduce and recirculate tourism capital, thus perpetuating the issues of structural violence. Higgins-Desbiolles’ (2018) paper on the incompatibility of growth and sustainability discusses three powerful interest groups within the capitalist framework upholding this incompatibility in a growth centred society including: subservient governments, powerful cooperations, and consumerised citizens. Politicians have become fetishized to growth and now seek corporate funding for campaigns and voter support

through hitting growth targets they promise to deliver (ibid.). Within the tourism industry, the government ministries promoting tourism have become fixated on marketing agendas and meeting tourism goals defined in dollar, growth, and employment metrics (ibid.).

Overall, this results in economic sustainability trumping all other forms of sustainability.

When efforts to pursue sustainable forms of tourism are centred around efforts to promote growth, issues regarding environmental and social sustainability become overlooked.

Continued growth reproduces issues of structural violence, which in turn serves to recirculate tourism-as-capital and degrade the environment and culture. When sustainable tourism is intertwined with growth-orientated goals, environmental and cultural degradation become a structural issue within the tourism industry through issues of structural violence, contradicting the goals of sustainable tourism. Therefore, the structural violence generated by the tourism industry under a capitalist framework suggests the incompatibility of true sustainable tourism with growth.

Conclusion

This paper has argued that the production of inequality and waste are structural features of tourism under a capitalist society and has negatively impacted the culturally significant subak system in Bali. In examining the tourism industry within its role of sustaining capitalism, this paper has explored how tourism commodification generates structural violence whilst simultaneously harnessing its value to create further opportunities for tourism growth. The structural production of inequality has cemented an unequal power dynamic between the tourism industry and local communities, meaning the economic needs of the former trump the environmental and cultural needs of the latter. Furthermore, the structural production of waste has decreased the availability of water necessary for the essential functionings of subak due to its contribution towards the water crisis. In turn, Bali's foundational *Tri Hita Karana* philosophy has been broken down, signifying the degradation of Balinese culture in which modernisation theory cannot justify. Sustainable tourism, when intertwined with growth, is unable to fully internalise the cultural and environmental costs of production stemming from tourism commodification and structural violence, as exemplified by Bali's subak. Therefore, the structural violence of the tourism industry suggests the incompatibility of growth and sustainable tourism.

The paper presented here could be perceived as rather "total", where seemingly all things tourism related are linked to commodification and structural violence. Therefore, it is important to highlight some caveats and alternatives that present tourism in a different light. Firstly, this analysis does not necessarily apply to tourism as a whole, but only to

tourism within a capitalist context. Therefore, it is not tourism that turns environments into commodities and alters culture, but capitalist tourism. Secondly, I do not aim to suggest the capitalisation of tourism results in the commodification of all things related to tourism.

Obstacles are present in the processes of commodification, such as resistance by locals, therefore, the full effect of structural violence is also shaped to the extent of this “double movement”. However, as the paper recognises, the opposing forces of tourism actors are often minimised due to inequalities in power. Furthermore, this study is limited to a local evaluation of tourism growth and sustainability and does not look for international patterns of global tourism’s structural violence. Therefore, further studies need to be carried out to establish the effects of tourism’s structural violence as a global phenomenon.

The criticism of tourism operating specifically under a growth-orientated capitalist framework leads us to naturally question how tourism can be conceptualised from a post-capitalist point of view. Degrowth theory has offered a possible direction in fulfilling a true form of sustainable tourism, in which I can only explore briefly here. Degrowth is a “political and philosophical approach to development that emphasises a smaller economy, localism and anti-consumerism”, focusing especially on sustainably decreasing global production and consumption patterns (Butcher 2021, p.2). Degrowth theory when applied to the tourism industry would remove the prioritisation of exponential growth as a goal and would entail a radical decline of tourism in line with broader, more sustainable patterns of production and consumption (Büscher and Fletcher 2017). This would involve a closer connection to the local natural environment, meaning tourism would no longer be interwoven with consumerist-ideologies and increasing tourist attraction goals (Scott-Cato 2012). In this way, tourism contextualised in a post-capitalist sense can be used as a force for progressive

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environmental and social justice (Higgins-Desbiolles 2018). However, what tourism would look like in this post-capitalist sense and whether this could still be conceived as 'tourism' in this brief conceptualisation is open to question. Yet, with the dangers structural violence proposes under tourism in a capitalist framework, degrowth offers an inviting direction towards true sustainable tourism.

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Appendix

Appendix 1: Questionnaire

Hello, my name is "10311318", and I am a university student in England. I have become interested in how the subak functions and I am currently writing my dissertation on the effects of tourism on subak.

Halo, nama saya "10311318" dan saya pelajar di salah satu universitas di England. Saya sedang menulis riset tentang fungsi subak dan apa efeknya dari perkembangan turis pada sa'at ini.

I am looking to get better information on how tourism has affected subak. Your names and identity will remain anonymous in my dissertation.

Saya sedang mencari informasi yang lebih baik bagaimana efektasi turis untuk subak. Nama anda tidak akan saya cantumkan di dalam makelah.

Q: What is your perception of tourists in Bali? Do you think Bali is better off with tourists?

Q: Apakah persepsi anda tentang turis di Bali? Apakah menurut anda Bali akan lebih baik tanpa turis?

Q: Do you think tourism has had a positive or negative impact on subak? What are the impacts?

Q: Apakah anda pikir turis memberi efek positif atau negatif untuk subak? Kalau iya apakah efek-efek tersebut?

Q: Has there been an issue of pollution and waste on subak? If yes, what do you think is the cause for pollution and waste?

Q: Apakah ada masalah-masalah polusi dan sampah untuk subak? Menurut anda, apakah yang menyebabkan polusi dan sampah?

Q: What has changed about Bali and subak without tourists since COVID-19?

Q: Apakah yang sudah merubah Bali dan subak sejak turis berkurang karena COVID-19?

Q: What is the system for receiving water for your subak?

Q: Apakah sistem yang di pakai subak untuk menerima air?

Q: Has there been any issues when receiving water for subak? If yes, why have there been issues?

Q: Adakah masalah-masalah untuk subak dalam sistem pengairan? Kalau iya, kenapa ada masalah-masalah tersebut?

Q: What are the biggest threats for the future of subak?

Q: Hal-hal apakah yang paling besar yang bisa merusak subak di masa depan?