

Locality in a Global Era: The Schlosberg Model of Environmental Justice and Island Mining

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The environmental and social impacts of large-scale mining projects are highly visible, with scarred landscapes often mirroring the scarred society that inhabits them; however for an island and its inhabitants the scale of these impacts are significantly more severe due to the sheer proportion of the landmass that is affected. This paper will apply Schlosberg's model of environmental justice to the case-studies of mining on the Pacific Micro-nations/island regions of Nauru and Bougainville. It will examine the role that international market forces have in creating tensions between the global core and local periphery through alienation, exploitation, disrespect of local practices and the loss of local subsistence, as well as examine the competing environmental rationales at play.

Phosphate mining on Nauru began in the early 20th century whilst the island was a colonial possession of Germany and subsequently continued when the island became an Australian protectorate (Gowdy and McDaniel 1999, 333-334; D'Odorico and Rulli 2014, 324-325). According to D'Odorico and Rulli (2014, 324-325) by 1968, when the island gained political independence, 34 million tons (sic) of phosphate had been extracted and sold, initially within colonial empires and later on the global market, but the vast majority of the resultant wealth that fell into the protectorateship of Australia was never invested back into Nauru (International Court of Justice 2014; *Nauru v. Australia* 1989; Gowdy and McDaniel 1999, 334). By this time the islands' phosphate mining had already entered a slow decline; the newly-independent Nauru continued the mining industry though, as by this point it had become the wealthiest Pacific nation per capita from exports allowing the island to import its food needs, and thus negating the effects of the loss of subsistence agricultural lands (D'Odorico and Rulli (2014. 324-325). Thus the relationship between Nauru and the Global Economy is easily representative of a Core-Periphery relationship by which the developing or underdeveloped peripheral nations, such as Nauru, absorb the environmental 'bads' whilst the environmental 'goods', such as the raw resources required to perpetuate the industrial mode of production and the creation of surplus wealth, disproportionately benefiting the developed and early-industrialising core (Wallerstein 1974, 387-392; Willis 2011, 80-81; Dicken 2007, 33).

The case of Bougainville's past is similar to that of Nauru but with an extra degree of complexity. Bougainville was another colonial possession of Germany which subsequently became an Australian protectorate in the aftermath of World War I, joining an independent Papua New Guinea in 1975 (Banks 2008, 23-24; Regan 1998, 272). An extra degree of complexity was present in the case of the Bougainville core-periphery relationship as Bougainville was comprised of ethnic Melanesians (more closely related with Solomon Islanders) whereas the government of Papua New Guinea which was responsible for the negotiation and royalties from the mine was comprised of ethnic Papuans, who used the revenue from the mining venture to consolidate their own ethnic support bases; which can be

viewed to have created not just an international core-periphery relationship between Papua New Guinea and the global economy, but also a domestic core-periphery relationship between the Bougainvillian Melanesians and the domestic elite of the Papuans who held political power (Regan 1998, 269-272).

According to Schlosberg (2004, 518; 2013, 38-40) the traditional basis of environmental justice is the inequity in the distribution of environmental 'bads', such as soil degradation or waterway pollution, and environmental 'goods' such as raw resources or wealth. The position of distribution at the centre of studies into environmental justice is easily justifiable when one considers the enormous inequities emerging among the members of the global economy, both among states and individuals; this is exemplified by Wade's (2008, 32) 'champagne glass' of inequality which shows 60% of the world's population possessing a mere 5.6% of the world's wealth and the wealthiest 20% possessing an astonishing 82.7% of the world's wealth (calculated by Gross Domestic Product, GDP). This inequality is further exacerbated when one considers that the vast majority of the resource extraction that contributes to the industrial mode of production and thus to the global capitalist economy is drawn from the regions in which those most alienated from the final products or surplus wealth reside (Dicken 2007, 33; Willis 2011, 79; van Krieken et al 2014, 419-421; Marx 1981, 242-244).

In both the case of Nauru and Bougainville the distribution of the environmental 'goods' and 'bads' is a clear cause of concern and conflict when it comes to the local peoples' conceptualisations of environmental justice. A major concern in the case of Bougainville was that little of the wealth from the Panguna mine (which contributed to nearly 50% of Papua New Guinea's total GDP) was being reinvested in Bougainville (Rotheroe 1999, 60-62). This distribution of revenue, combined with the unfair compensation process, which was calculated off of predicted earnings from cash-crops whilst ignoring that much of the surrounding agriculture was purely for subsistence, created the situation in that subsistence farmers who most suffered from the environmental 'bads' of land and waterway degradation were also those least compensated; exemplifying the unfair distribution of environmental 'goods' and 'bads' identified by Schlosberg (2004, 518; 2013, 38-40) as contributing to environmental injustices (Regan 1998, 276-277).

The parallels in the cases continue, with Nauru having suffered from the environmental 'bads' which resulted in the degradation of 80% of their total landmass whilst receiving little of the 'goods' in exchange (Gowdy and McDaniel 1999, 333-334; D'Odorico and Rulli 2014, 324-325). By the time Australian Protectorateship had ceased in 1968 the royalties from phosphate mining that had flowed to Australia was estimated to have been worth \$A300 million at the time, of which the International Court of Justice settlement would later return \$A120 million in the form of a rehabilitation fund; although it is well-worth noting that with inflation the original \$A300 million would be near to \$A2 billion at the time of compensation, meaning that Nauru was compensated 6% of the total phosphate extraction under Australian governance (Gowdy and McDaniel 1999, 334; Reserve Bank of Australia 2014). Whilst the role of distribution as the basis of environmental justice plays an important

role, Schlosberg (2004, 518; 2007, 91-95; 2013, 40-45) challenges its sole use as flawed in favour of its combined use alongside the concepts of recognition, participation and capacity.

Schlosberg's (2004, p.518-522) model and its concepts of Recognition can be exemplified by the local Melanesian communities near the Panguna Copper Mine in Bougainville (Regan 1998, p.269-276). The liberal model of economic globalisation and industrialisation inherently ignores local values and beliefs in favour of a one-size, fits-all model of development; thus in the case of Bougainville the diverse local populations and the strong value they respectively placed on their ancestral lands, rivers and traditional modes of production were not recognized and responded to accordingly which served as a catalyst to violent conflict among many of the local peoples (Regan 1998, p.272-272; Schlosberg 2004, p.518-522). According to Rotheroe (1999, 62) for sixteen years prior to the civil war that resulted in the deaths of an estimated 10% of the small island's population, a group of concerned landowners had joined the afore-mentioned residents in raising concerns about the degradation of the land and waterways; complaints that continued to escalate and be ignored until finally being driven to violent confrontation when the expansion of the mine was authorised further. The recognition of local land practices and customs or even the subsequent recognition of the growing concerns of the Bougainvillians by either the ethnic Papuan government or Rio Tinto could thus have potentially eased the, at times competing, concerns of the land owners, who felt that the distribution of compensation was inadequate, but also eased the concerns of those who were concerned about the degradation of their spiritual and ancestral homelands as early as 1974, two years after the mine's opening (Schlosberg 2004, 519; Brown 1974, 26-27).

The third point Schlosberg (2004, 519) addresses as being a crucial element in environmental justice is that of participation. Schlosberg (2004, 519) argues that if the concerns of actors are not recognized then those actors will be increasingly peripheralized and become withdrawn from participating in decision-making processes; thus perpetuating a vicious cycle by which those who are least recognised, participate less, and are further overlooked as a consequence, by the established processes. In the case of mining on Bougainville, as the lack of recognition of the concerns and practices of the Bougainvillians increased they became much more focused on constructing their own political processes with calls for secession from Papua New Guinea beginning as early as independence from Australia and rising to a crescendo with the decision to expand the Panguna mine; by which point the disillusionment and withdrawal of Bougainvillians from participating in the political processes lead to the establishment of the Bougainville Revolutionary Army (BRA) and civil war (Regan 1998, 277-280; Rotheroe 1999, 57-62). The concerns of the role that global economics were playing in the despoilment of the local environments was highly visible in the ideology of the BRA's leadership, with Francis Ona viewing the island's troubles as being emblematic of the 'white mafia' that controlled the Papua New Guinean, and by proxy the Bougainvillian, economy; his proposed solution to this was the complete independence of Bougainville from the current political processes and the cessation of all mining operations (Regan 1998, 277-278). This effectively demonstrates the effect that a lack of recognition would have on a peoples' participation; with many Bougainvillians supporting their absolute withdrawal from

the current political and economic processes in favour of isolationism (Schlosberg 2004, 519).

The fourth point that Schlosberg (2007, 91-92) raises is that of capability and the ability for actors to continue functioning under their own capacities. The role that global market forces and the liberal development ethos plays in reducing the ability for a people to continue functioning under their own resources and institutions plays a crucial role in understanding environmental justice (Rapley 2007, p.13-14; Heywood 2011, p.104; Willis 2011, p.40-44). The overarching liberal market ethos and industrial mode of production inherently not only ignores the local customs and practices of those in the domestic or global periphery (as seen in Schlosberg's (2004, 518-522) point of recognition) but also ignores the physical and geographic reality in which local peoples' reside and ultimately rely upon for survival, under what are often subsistence-focused modes of production (Marx 1981, p.239-245; Willis 2011, 71-72). In the case of Nauru, the island's ability to function under its own capacities and capabilities has been entirely distorted by the very market forces that were responsible for the demands for its phosphate (Gowdy and McDaniel 1999, 334-335; D'Odorico and Rulli 2014, 324-325). A cruel irony is present in the case of Nauru in that not only were its capabilities to be self-sustainable in food production destroyed by the loss of topsoil from mining and fish stocks from toxic runoff; but that its population which had been traditionally limited by its small size and capacities grew six-fold as a result of the availability of increased wealth and food imports resulting in increasing demands for fresh water imports even as its own local water-table dropped considerably due to the effects of over-mining (Gowdy and McDaniel 1999, 335). This irony is particularly biting when one considers that the primary use of the phosphate extraction was for the purpose of increasing food production via the industrial mode of agricultural production and its reliance on phosphate-based fertilizers. This growing dependency of Nauru on the ability of the global market to supply food and even water leaves it particularly vulnerable to international market fluctuations that periodically cause the island's economic capital from phosphate sales to fall; with a prime example being the 2007-2008 Food Crisis in which foreign export bans caused an increase in food prices at the same time when the value of the Nauruan currency fell, meaning that many staple foods were simply unaffordable and poverty on the island grew dramatically (D'Odorico and Rulli 2014, 325; Tsani 2013, 182, 190-191).

Thus it can be seen, through the lens of Schlosberg's Environmental Justice model and its key concepts of distribution, recognition, participation and capacity that in both the cases of Nauru and Bougainville international market forces served to create tensions between the local and the global; through the exploitation of local environments to support international demands and with the complete ignorance or wilful ignoring of local customs and practices, participation or self-sustainability.

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