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The Lifeblood of the Cyborg: Or, the shared organism of a modern energy corporation and a small Northern Territory town



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ABSTRACT

The Blacktip gas project, owned by the multinational corporation Ente Nazionale Idrocarburi (ENI) and located near the marginalised, Indigenous-majority town of Wadeye in the Northern Territory of Australia, is the ethnographic setting to explore the connections of energy industry projects in the age of the Anthropocene. At the core of these issues are considerations of how carbon energy industries operate, how these industries are transforming natural and social ecologies, and how the benefits and costs of the sector are circulated. Much of influential research work and government policy tend to frame these considerations within analytical methodologies of “economic development”: despite pockets of public opposition, the presence of energy projects such as Blacktip are largely taken for granted by authorities, and debates are limited to questions around business-state cooperation and wealth generation. As a methodological alternative, I apply Deleuze and Guattari’s concept of the assemblage to analyse the Blacktip project as a complex network that expresses broader social power relations. I suggest the disrupting image of the cyborg – as the colonising, techno-capitalist blend of human and computer, with carbon-based energy as its lifeblood – as a modern-day assemblage that offers a new method for understanding modern energy cycles, in particular how they are structured by contemporary carbon energy industry corporations. I conclude by arguing that if dominant, taken-for-granted discourses around the benefits of projects such as Blacktip are critically challenged by the (albeit limited) analytical device of the cyborg, social and ecological alternatives can be more openly imagined.



The Blacktip well platform in the Timor Sea. Source: [1].

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1. Introduction

1.1. The setting

This work of social research on modern energy industries focuses on an inconspicuous, almost invisible energy project that operates in northern Australia. About 110 km off the west coast of the Northern Territory (NT) stands the Blacktip gas drilling platform, a facility owned and operated by the Italian-based energy multinational corporation Eni Nazionale Idrocarburi (ENI). The well extracts natural gas from beneath the floor of the Timor Sea, which is then pumped to an onshore processing facility at Yelcherr Beach, about 250 km southwest of the Northern Territory's capital city Darwin. From this facility the energy then flows into a vast pipeline network, enabling it to become the main fuel source for the Northern Territory's electricity generation. With contracts between the company and the Northern Territory Government extending over twenty-five years, the project should generate hundreds of millions of dollars of revenue for ENI ([2]: 91).

Blacktip is in many respects an entirely unremarkable energy project (and hence serves as a useful target for analysing common aspects of the global carbon energy industry). Based on industry standards, annual extraction rates from its gas field are not particularly high, and the comparative size of the product's end market is limited ([3]: 44). Due to the corporate-friendly local taxation regime it operates under (including a system of royalties paid to the Northern Territory Government based on profits rather than revenue) ([4]: 20–30; [5]: 72; [6]), the supply contract should remain a relatively minor, yet stable income flow for the company. ENI itself can be described as a normal energy corporation. The company is a sizeable player in the global petroleum extraction industry, and it commands the influential support of the Italian state. However its influence is dwarfed by industry giants such as Exxon Mobil, PetroChina and Chevron [7]. It has a typical corporate structure (publicly listed, with shareholder interests focused in Europe but dispersed around the globe) ([8]: 19). As is *de rigueur* in energy industry circles, the corporation makes much of its commitment to "sustainability", and promotes its social and environmental investments in economically marginalised communities [9,10]. Concurrently, Blacktip has quietly locked northern Australia's economy into an immediate future of carbon fuel dependence. Its long-term contracts provide limited scope for the project's effects on climate change to be addressed, or to explore whether less carbon-intensive alternatives can be developed ([11]: 6–9).

Another altogether ordinary aspect of ENI's Blacktip gas project is its capital-intensive, highly automated *modus operandi*. The Blacktip well facility itself is entirely robotic. Humans seldom visit [12]. Similarly, the onshore pipeline infrastructure is monitored from a computer control room in Darwin, situated a couple of hundred kilometres away [13]. At the Yelcherr processing plant, human staff members are minimal. Even during the project's booming construction phase from 2007 to 2009, work was contracted and sub-contracted out to niche engineering firms, ultra-specialised capital equipment (largely manufactured overseas) was used, and the workforce was flexible, tech-savvy and fleeting. Few local jobs were created. In short, the system is a showcase of modern industrial achievement: rationally designed as a networked automaton, with human intervention only required for monitoring, system maintenance, facility security and contingencies. As I will discuss here, Blacktip – and the modern energy industry corporation more generally – is the quintessential cyborg assemblage.

Only a few kilometres away from this network of industrial automation is the remote town of Wadeye, a marginalised, mainly Indigenous community of almost 3000 residents and far fewer jobs. A permanent township in the area was first established in the 1930s by the Catholic Church as a mission, and led to the grouped settlement of dozens of local clans into a relatively small, faux-suburban setting. The visible poverty, unemployment and housing overcrowding of contemporary Wadeye attract their share of intermittent national media

attention, as a site of Indigenous disadvantage *in extremis* (see for example [14–16]). The town's network of youth "gangs", grouped according to heavy-metal band names such as the Judas Priests, Evil Warriors, Fear Factory and the German Boys, have also been favoured curios and targets of remediation for government and the media [17–20]. Linked to this is the modern state's prevailing methods of intervention: Wadeye has been the site for many bureaucratic studies and trials of policy innovations (including a high-profile Council of Australian Governments (COAG) trial from 2003 to 2006). It has also received sporadic visits from government Ministers, including frequent stop-overs from then Indigenous Affairs Minister Mal Brough from 2006 to 2008 during his planning and implementation of the *Northern Territory Emergency Response* (otherwise known as the Intervention) [21–23].¹



Wadeye gang youth, as represented in The Age Newspaper. Photo: Terry Trewin. Source: [19].

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Due to its geographic proximity to Blacktip's infrastructure, the town of Wadeye has been unavoidably intertwined into the project's extractive network ([24]: 205). Yet despite the sporadic public attention given to the town's poverty, its residents played only a marginal role in Blacktip's development and have remained almost entirely redundant to its ongoing operational flows. The most sought-after contribution from the local population has been acquiescence: for the people to blissfully ignore the presence of Blacktip energy project as much as possible, and to remain a pliable, unobtrusive appendage of the cyborg.

1.2. Research approach

This paper is the analytical offspring of many years of ethnographic research on the cultures of bureaucracies and policymaking in the Northern Territory, including in the town of Wadeye. From 2007 to 2009, during the period of the Blacktip gas project's construction, I was a frequent visitor to Wadeye. Although my professional focus at the time was on a local government amalgamation reform, I paid keen interest to the Blacktip development and its local effects. From 2010 to 2012 as part of a formal academic research program, my colleague Julie-ann Bassinder and I conducted interviews with 96 Wadeye residents on three separate occasions, touching on issues around community governance, economic development, employment, training and political agency. I draw on these experiences and interview transcripts

¹ The *Northern Territory Emergency Response* was a highly controversial set of program initiatives launched unilaterally by the Australian Government in June 2007 that was enabled by the suspension of the Federal Racial Discrimination Act. It involved, *inter alia*, the rapid introduction of radical welfare reforms, compulsory five-year leases over townships on Indigenous land, reform of the Community Development Employment Projects (CDEP) (an Indigenous-focused community works program), widespread alcohol and pornography restrictions, increased policing and compulsory health checks.

as material for this paper. However there were important limitations of the knowledge and insights gained from this research approach; I attempt to emphasise here my outsider status in the community of Wadeye, due to my itinerant work patterns, cultural and linguistic barriers, and my own social positioning as a non-Indigenous government employee for much of the project. My imposition of the unconventional, foreign metaphor of the cyborg onto this setting is in part an expression of a process of self-reflective analysis.

2. The Cyborg: an alternative methodology for understanding the energy corporation

2.1. The concept of assemblage

By focusing on this one particular example of an energy corporation in practice, I aim to challenge conventional methods of analysing the modern energy industry. As I will discuss later, government bureaucratic and private sector publications tend to treat energy projects such as Blacktip as largely beneficial, as part of a hegemonic discourse around “economic development”, “real jobs”, and the necessity of market-based growth (Polanyi, 1944: 30–37; for a northern Australian context see [25]: 7–10; [26]). This official perspective works to separate the operations of Blacktip from its impact on climate change (by neutralising the project’s consequences on the basis of exploiting future uncertainty ([11]: 6–9; [27])) and from broader social issues such as employment, community governance, education, vocational training and social well-being, the outcomes of which are predominantly proclaimed to be dependent on individual behavioural patterns ([28]; see for example [29,30]).

In lieu of adopting hegemonic teleological narratives around “economic development” and the imagined creation of “real jobs” by this project, an alternative method of conceptualising it (and other social formations) is through ‘the assemblage’, a concept borrowed from the original works of Gilles Deleuze and Felix Guattari ([31]: 1–24; 238–242; 376–389; [32]). Assemblages draw together heterogeneous elements of discourses and matter, or what Deleuze and Guattari call axes of ‘machinic assemblages’ (that relate to systems of matter, things and actions) and ‘collective assemblages of enunciation’ (that refer to language and discourse, or ‘regimes of signs’) ([31]: 6; [32]: 92–94). This allows us to think of corporations, energy industrial projects, human settlements, labour markets and so forth not as discrete and contained entities with an ordered number of parts, but as networked, complex multiplicities that connect the local with the global, and bridge distinctions between technology, society and nature ([31]: 1–22).

Fundamentally, the assemblage offers a method for understanding power, in that the assemblage refers to the *assembling* of a hegemony, akin to the claiming of ‘territory’ ([31]: 376–377). This process of binding heterogeneous elements together, or ‘territorialisation’, is a power struggle in which forces attempt to dominate through ‘coding’, ‘recoding’ and establishing regulated patterns of social action ([33]: 132; [34]: 419). Importantly, these groupings are constantly undergoing a process of *becoming assembled*, with tensions between organisation and change, structure and flux ([31]: 1–22; [32]). The Deleuzian scholar J. McGregor Wise speaks of assemblages as elements of qualities, lines and speeds rather than objects ([32]: 92). Thus processes of territorialisation are being constantly disrupted by agencies of deterritorialisation, or ‘lines of flight’ from the assemblage ([35]: 16; [31]: chap 1; 238–242; 386–389; [32]: 94). These constant flows of transformation, subversion and resistance (or ‘decoding’, in the language of Deleuze and Guattari) give the assemblage its dynamic complexity and unpredictability, and also its revolutionary potential: ‘A territory is always en route to an at least potential deterritorialization, even though the new assemblage may operate a reterritorialization It is as though forces of deterritorialization affected the territory itself’ ([31]: 378; 380).

2.2. The cyborg as assemblage

As an analytical extension, I suggest the term “cyborg” to represent a key assemblage of modern-day techno-capitalism that simultaneously embodies development and exclusions, innovation and redundancy. An easy understanding of the cyborg is as a blending of dichotomies: a creature of human and machine. With reference to the thinking of Donna Haraway [36] and Philip Mirowski [37] and their analytical development of this metaphor, the cyborg can be more complexly thought of as the colonisation of mind and body by the computer, even the hegemonic ontology of the modern age. The term “computer” is applied here not only as a physical instrument of metals, plastics and microchips, but as an agent noun: the being who computes, the paradigm of information processing that links the animate and inanimate ([37]: 11–18). This symbiotic ontology relates to Heidegger’s concept of the ‘techne’ as its blending of subject and object, whereby technology is understood as the process of (human) subjects ‘revealing’ the instrumentalities of objects through their use ([38,39]: 135–136). In this sense the cyborg becomes more than organic-mechanical hybridity *per se*, but a way of understanding a mode of agency defined by the information flows that constitute and enable this techno-human hybridity.

This modern mode of agency is rendered even more powerful because of its near-invisibility and taken-for-grantedness. The cyborgian image may appear alien and as a blasphemous device ([36]: 117) for analysing contemporary Indigenous Australia (amongst other targets). Yet I argue the cyborg has permeated modern life-worlds. By focusing on this ubiquitous creature as an analytical tool, the cyborg can represent a new methodology for understanding many modern assemblages, including the global carbon energy industry.

2.3. Markets and corporations as cyborg assemblages

Industrial developments such as ENI’s Blacktip project, with its blending of high-tech infrastructure, computer monitoring and human-machine management, are straightforward examples of cyborg assemblages. The rarified institution of the labour market and the modern corporation are perhaps less obvious cyborg entities. A key to this conceptual leap is understanding the cyborg as a mode of rationality. Philip Mirowski writes of the fetishised “market” as a fundamental modern entity of computation, a primary coordinator of information between cyborg agents, and an automaton for coordinating exchanges and utilities. Therein lies his rationale in describing economics as a cyborg science: the economy is no longer construed as the structured allocation of scarce resources to given ends, but as networks of economic entities who function as information processors ([37]: 235–237). This is reflected in the thinking of the prominent neoliberal thinker Friedrich Hayek, who places information processing as the key problem for a ‘rational economic order’ to grapple with, in particular the ongoing issue of dispersed and incomplete information: ‘The economic problem of society is thus not merely a problem of how to allocate “given” resources’, he writes, ‘it is a problem of the utilization of knowledge which is not given to anyone in its totality’ ([40]: 519–520). A computational role, as a networked processor of information within contemporary techno-capitalism, is what constitutes the market as a cyborg assemblage.

The modern corporation is another quintessential cyborg assemblage. Deleuze sees the corporation – rather than the factory – as the pre-eminent economic entity of the modern age, and as a key site for the transformation of contemporary social relations and the establishment of ‘ultrarapid forms of free-floating control’ ([41]: 4). He writes of the rise of corporate power as linked to capitalist interests losing focus on production *per se*, in favour of the management of finance, services, marketing and public relations. Under these governing configurations, corporations don’t essentially own production, but instead work as a powerful exchange network of financial interests ([41]: 3–5).

To use my ethnographic example from the energy industry in Australia's north, ENI is a typical multinational corporation. It is a publicly-listed company, bound by overlapping international legal codes, with shareholders dispersed around the globe [8]. Its mode of decision-making rationality is profit-driven, but is likely to be based on computer-generated algorithms more than purely human shareholder interests. Its mode of operations is a web: many contracted and subcontracted firms were engaged in the construction of the Blacktip facilities, and another corporate consortium owns and manages the pipeline [12]. The ongoing governance of the project blurs between the state and the corporation. ENI is nothing like a singular, closed unit, nor do its operations have strict spatial or human boundaries. Within my alternative analytical methodology, the corporation is a cyborgian network.

3. Conventional methodologies for understanding the Blacktip project

3.1. Blacktip and dominant narratives of economic development

Media attention, academic research and government pronouncements regarding the Blacktip energy project have been scant and largely uncritical. The Northern Territory Government's environment and social impact assessment process passed with minimal public attention, and full approval for the project was granted [42]. Details on the terms and conditions of gas supply between ENI and the NT's Power and Water Corporation have been kept confidential, as have details on royalty payments being made to Indigenous landowners. One of the few public documents on the Blacktip project, authored by ENI management staff and published in a gas industry journal, was unequivocally upbeat, claiming the project 'will provide energy security in the next two and a half decades ... [and] will be a significant catalyst for development in the NT' ([43]: 274). When there has been critical discussion of the project in the public domain, it has generally been brief and has focused on functional issues such as supply disruptions (see for example [44]).

The lack of public scrutiny – the near invisibility – of the Blacktip project due to its matter-of-fact acceptance is treated here as a conventional method of analysing the energy industry. Although there have been vocal and persistent pockets of opposition to the practices of resource extraction industries in the Northern Territory (including at NT Government Ministerial level ([25]: 71–72; [5,45,46])), there is a hegemonic mode of thought that *any* industrial development is of overwhelming net benefit to northern Australia's economic and social fabric. This pro-development logic has become akin to common sense in government policy circles, and has been expressed uncritically in numerous policy texts related to Australia's north. The Blacktip project itself represents more than a steady fuel supply for the Northern Territory's electricity generation. Its private-sector, market-oriented *modus operandi* appeals to the bureaucratic imaginary around economic development ([47,45]), and reinforces dominant future-oriented conceptions of the beneficial effects of carbon energy projects ([11]: 5–6) – not only as a path to a prosperous collective future, but also as the practical solution for overcoming Indigenous disadvantage [48–51]. Within bureaucratic and corporate circles, Blacktip is generally treated as the creation of a lifeblood upon which the region's economic future relies. I argue this taken-for-granted support for Blacktip is an expression of the prevailing cyborg rationality of our age: that a techno-capitalist agency structured by transnational human-industrial corporations such as ENI is perceived not merely as preferable, but unquestionable and matter of fact. Whether or not the automated networks of Blacktip materially achieve these imaginations of development is somewhat irrelevant, because the future imaginary of its telos has already been deployed.

3.2. Employment, energy and "market-driven" development in northern Australia

As previously discussed in this paper, one key aspect of the hegemonic cyborgian rationality at work is the pre-eminent role given to the market, as the pre-eminent institution of information processing within techno-capitalism. In this sense the market serves as a modus of cyborgian meta-computer (with computer understood here as the network of human-machine computation) that structures and guides human-machine agency.

This fundamental role of the market within a cyborgian ontology is reflected in the discursive fetishisation of market-oriented tropes in policy texts and their unproblematised positioning as enablers of "development". For instance, in the 200 pages of the Australian Government's seminal 2015 report *Our North, Our Future: White Paper on Developing Northern Australia*, the term 'market' is used 126 times, 'sustainable' or 'sustainability' are applied in 51 instances, 'private sector' 36 times, and 'free' or 'freehold' 40 times, each time without any technical definition or qualification [26]. Other relevant policy texts conform to similar discursive patterns [50,52].

In accordance with this rationality, a key appeal of the project was ENI's pledge of private sector-generated income flows, training and work opportunities – in short, the alluring provision of "real jobs" to local Indigenous residents. This offered a straightforward, market-oriented and technology-assisted solution to how Indigenous socio-economic disadvantage should best be overcome, in particular in an area of high unemployment and low industrial development. The "real jobs" imaginary has significant discursive effect around how humans (read labour market inputs) are expected to interact with energy industry projects. In northern Australia, there is also an inevitable intersect with Indigenous affairs policy, and the bureaucratic task of mediating Indigenous participation in the labour market.

Following a consistent pattern, the 2015 *White Paper* unproblematically applies the term "labour market" as the cyborgian structure guiding human agency. It also calls for more limited state intervention, or more "flexibility", over labour market participation (which effectively translates as the facilitation of more profitable operating environments for corporations, and more compulsion for workers):

A more flexible labour market system in the north, and across Australia, will allow businesses to bargain over wages and conditions specific to their business needs, as well as encourage increased investment, more jobs and income growth ... Efforts to remove disincentives to work inherent in the welfare system will also encourage greater workforce participation, particularly at the lower skilled end of the labour market ([26]: 9).

Indigenous people constitute a relatively high share of Northern Australia's population, particularly in non-urban areas [53] and governments have identified the workforce employment gap between Indigenous and non-Indigenous Australians as a key source of Indigenous disadvantage in these regions [54,55]. Along with the promotion of "labour market flexibility", there has been a consistent government policy focus on prescribed individual behavioural change as a key solution to the unemployment gap. Based on my experiences in Wadeye and in Indigenous-majority communities elsewhere in the Northern Territory, I found it remarkable how much governmental effort was directed into education, training and employment initiatives, which aimed at fostering "work readiness". These territorialisations of the Indigene generally apply labour market logics as the central reference point (see for example [52]) and set a type of cyborgian moral community for the economy ([56]: 82–84; [57]). The overarching goal is to improve the policy targets' processing of labour market-oriented information, to make them better modern *computers* of their projected interests – better *cyborgs*.

For example, the former conservative federal Indigenous affairs

minister Mal Brough, on his second parliamentary reading of the *Northern Territory Emergency Response Bill* in 2007, lamented:

In an environment where there is no *natural social order of production and distribution* [in Indigenous communities], grog [alcohol], pornography and gambling often fill the void ... A viable economy and *real job prospects* make education meaningful and point to a life beyond abuse and despair [58] (italics added).

Similarly, the Labor Government's Jenny Macklin, Brough's successor, wrote of the importance of 'helping to rebuild *positive social norms* [for Indigenous people] that underpin daily routines like going to school and work' ([59]: 1, italics added). And the current Indigenous Affairs Minister Nigel Scullion outlined the following role for policy: 'We have fundamental structural and attitudinal problems to change... [to enable Indigenous participation] in future economic developments' [29]. The language extolling behaviour change was even more explicit in an influential government-commissioned review of Indigenous employment policies, authored in 2014 by mining magnate Andrew "Twiggy" Forrest:

We already have massive levers we have not yet used to end the disparity—the power of the market, enforcing [school] truancy laws and changing our attitudes to expect and demand more for first Australians... Only first Australians themselves can make the necessary lifestyle changes... In a nutshell, it's time to end the paternalism, to expect able first Australians to stand on their own feet and become independent ([50]: 3; 5).

This individualisation of responsibility for employment and economic development was also expressed directly regarding the Blacktip project and its effects on Wadeye. ENI Australia's external relations and communications manager confidently delimited multinational corporations' capacity to foster local economic development:

The people and organisations that live and work in a region are responsible for the social and economic development of that region, as a part of that community. Some contributions can be made by resource developers, however it is up to the people themselves, the individuals and the families in any community to choose and then pursue their individual and collective destiny. Others cannot do it for them ([43]: 271).

Elizabeth Povinelli writes of the creation and maintenance of individualised responsibility, or what she coins the 'autological subject', as a core governmental technology of liberalism. Povinelli defines the 'autological subject' as 'the recursive ideology of the subject of freedom, the subject that chooses her life' but is simultaneously expected to "freely" make choices that conform with a market-oriented (cyborgian) rationality ([60,61]: 82). This construct raises a fundamental question of power: whose interests are best served by the discourse of individual, market-oriented responsibility? ([62]: 115) One practical effect is that it affords corporations much leeway in structuring operations according to their prepossessions. This political dynamic is succinctly expressed in the Australian Government's 2015 *White Paper*, in particular its unproblematised linkage of business interests with 'sustainable development':

Business is far better placed [than government] to understand the risks and rewards from northern economic development With the right policies ... The north will be an exemplar of sustainable development Key enabling infrastructure will create greenfield supply chains across agriculture, aquaculture and previously stranded energy and minerals resources. This will serve as the catalyst for new large scale projects in the key investment priority areas ([26]: 2–4).

The domination of corporate interests in a proposed industrial development (such as the establishment of the Blacktip gas facility and pipeline) is further strengthened when it can be justified as creating

"real jobs". Whether employment opportunities in the energy industry are significant, suitable or long-lasting is largely irrelevant, because the narrative of private-sector "real jobs" creation is so alluring to the dominant policymaking imaginary – in part because it neatly places responsibility for employment back on to the local individual, and away from corporations or governments. Thus local employment initiatives have become a key component of public relations efforts for the energy and mining sector more generally, including for ENI [3,9] and other corporations operating in northern Australia (see for example, [63–65]).

A second practical effect of the belief in individualised, market-oriented responsibility for employment is that "irrational" decision-making that does not follow dominant cyborgian logics becomes grounds for cyclical bureaucratic remediation of individual behaviours ([66]: 23–29; [67]: x–xv; [68]). These interventions are readily visible in Australia's Indigenous affairs policy arena, with its plethora of targeted youth services, education and training initiatives, "work-ready" and "life skills" programs, juvenile correction interventions, and so forth [28,69].

3.3. ENI's community investment strategy in Wadeye

Based on my own fleeting observations during this period, ENI's operations in the Wadeye area were widely perceived by residents and government official alike as peripheral or vaguely beneficial. Although I did note some complaints about the amount of forest cleared for the pipeline corridor, I never encountered overt expressions of local discontent towards the Blacktip development. These observations were corroborated by industry-funded social impact assessment studies conducted before and during the construction phase, which (predictably) reported that local attitudes towards the Blacktip project were mainly positive ([70]: 27; [43]: 271–272; 277).

Local support (or at least acquiescence) towards the project appeared to have been facilitated by ENI's royalty payments and provision of local funding grants – its 'community investment strategy', in corporate parlance [9]. One obvious aspect of this strategy, and its most explicit overlap with government policy priorities, was the corporation's local employment and training programs. During the Blacktip project's peak construction phase from 2006 to 2009, the corporation came to an agreement with the Australian and Northern Territory Governments to adopt an 'Australian Industry Participation Plan', aimed at promoting the use of local contractors and labour forces [3]. In Wadeye this initiative manifested itself through a vocational training program, prominently located in the main street's training centre. Some local participants did gain short-term employment on the construction project, in labouring and civil works capacities.

Another key component of 'community investment' has been the institution of royalty payments. Due to the location of Blacktip's on-shore gas processing facility and much of the pipeline on the Daly River / Port Keats Aboriginal Land Trust, ENI was obliged to negotiate a land use agreement with traditional landowners. This agreement was achieved by 2006 in conjunction with the hard-bargaining Northern Land Council, and resulted in undisclosed, well-targeted income flows for select traditional landowners ([43]: 279, 281).

The most prominent aspect of ENI's engagement with Wadeye, likely accentuated by the town's profile as a site of acute Indigenous disadvantage, was the corporation's sponsorship of various community programs. This strategy peaked in 2008, when the Blacktip project was locally at its most visible and most politically sensitive. During this year, ENI reported community investments totalling 312,129 euros that funded environmental health projects, an annual Wadeye Festival, the Murrinh-patha language centre, and the local Australian Rules Football (AFL) competition. In ostentatious fashion, Wadeye's Our Lady of the Sacred Heart School was even awarded a prize by ENI within the Schoolnet Project, which resulted in an entire class receiving a one-week trip to the Basilicata region of Italy [3].

The local effects of these ‘community investment’ initiatives underscore the ambiguous and complex interplays large-scale industrial developments can have on Indigenous socialities, as well as the dangers of constructing simplistic moral binaries between exploitative capitalism and Indigenous custodianship of the environment [71,72]. Using Deleuze and Guattari’s term, these community investment initiatives partially worked as a force of ‘territorialisation’ in support of Blacktip, by lending the project (and similar techno-capitalist developments) a hegemonic coalescence ([33]; [34]: 419).

3.4. Cracks in the edifice

Of course, one glaring absurdity of the situation in Wadeye is that even with lucrative, long-term and reliably profitable energy industry developments close by, the private sector has been incapable of providing enough “real jobs” to Wadeye’s residents. The Blacktip gas project will easily generate hundreds of millions of dollars of wealth in

[77,78]: 10–15)

During the years I frequented Wadeye, I was keenly interested in investigating the local effects of the Blacktip project. This was an uncertain interrogation, partly because I always remained an itinerant outsider in Wadeye. Despite my good intentions I never forged any enduring connections there, nor did I learn much of the main local Murrinh-patha language. I have no pretense of “expert” authority over its people and place. Despite morally competitive claims to the contrary, I contend this is a common experience for non-Indigenous itinerant professionals working in northern Australia’s majority-Indigenous communities [79–83]. Rather than counter my constrained perspective with authoritative truth claims based on statistics and formal research methods, I offer instead culturally subjective accounts of conversations and experiences from my limited time in Wadeye (filtered by my tentative application of the cyborg as an analytical methodology onto this setting).



its lifespan. Yet ten years on since Blacktip’s construction, the project’s earnings are now being largely extracted to ENI’s global shareholders. The handful of short-term local employment positions it generated have long since dissipated; besides a handful of on-site maintenance and security staff at the Yelcherr processing plant, management of the infrastructure network has become almost fully automated. Royalty payments from the project to a handful of important local families do continue, and limited support for the local land management rangers program is still provided (albeit related to rehabilitation of the company’s own industrial activities on Yelcherr Beach) [73]. These notwithstanding, funding for local community investment strategy initiatives has dried up.

With operations running smoothly and human involvement having been minimised, ENI’s gaze has now shifted elsewhere. Little mention is made of ENI’s operations in Australia in its corporate documents, let alone the Blacktip project (see for example [74]). In Wadeye itself, ENI and Blacktip have become virtually invisible. Besides glimpses of the pipeline corridor one gets from the main road into Wadeye, the rest of the project’s infrastructure is obscured from public view by distance and restricted access. This invisibility is its own hegemonic force: it lends the structure and practice of the Blacktip project its own air of inevitability, cordoned off from outside scrutiny. As Susan Wright and Cris Shore write, ‘the most effective forms of domination are often those that go undetected’ ([75]: 9). How can one confront and challenge something that one cannot, is not entitled to see? ([76]: 258–259;

Residential house in Wadeye. Author’s photo circa 2007.

There was an active local government council during my time there, and many Wadeye residents were engaged with the school, health clinic, arts centre and other local institutions. A community spirit was detectable. Yet for me, it was hard to overlook the signs of social discontent in the town. Despite its natural beauty and some friendly people I met during my time there, to me the prevailing mood in the place seemed sullen, restless. The ‘quasi-event’ of poverty was constantly on display, ‘ordinary, chronic and cruddy rather than catastrophic, crisis-laden and sublime’ ([60]: 13). Much of the housing was chronically overcrowded and appeared dilapidated; money and paid employment were obviously scarce. Two local residents described life in Wadeye to me as such:

The major thing here is boredom. There’s a lot of locals walking around, without work People give up and lose interest. We’re moving nowhere, going nowhere. I don’t see any of my family or friends working. I’m meant to be a role model for this community. How many people, locals, actually have jobs? It’d be interesting to see how many people are actually working [84].

Many people in Wadeye seemed to cope with the drudgery of poverty by just ‘getting by, and living on’ ([76]: 759). The prevailing pace of the town was languid. But there was also an edge of volatility and violence in the community, with signs of low-level rebellion against the prevailing order. Public infrastructure got damaged regularly;

graffiti was everywhere. An animosity towards governmental authorities was only thinly below the surface. For instance, one group of local residents stated:

The government saying the people don't want to look for job... but people do work hard here... No, [the Government] made promises but I thinks don't really happen... Never been changed [things aren't changing], just more white people, doesn't give a chance for Aboriginal people to honour this land [85].



Wrecked car on Port Keats Road. Author's photo circa 2007.

There was also an obvious presence of youth gangs in Wadeye, which occasionally erupted into sectarian feuding. I was in town twice when rioting between rival gangs occurred – an experience that was at

4. Wadeye as a cyborg assemblage?

4.1. Contemporary colonisations

It is convenient to think of a place like Wadeye as a backwater of modern economic activity, in which any industrial development should be welcome. I argue this is linked to deep-seated beliefs in settler-colonial culture around the bifurcated primitiveness of Indigenous peoples ([86]: chaps 1–2; [87]) and the assumed inevitability of modern “progress” [88,89]. As previously discussed, this rationality has propelled government policy related to ENI’s Blacktip project, and has afforded this development all practical support from the state.

As an alternative, I understand the community of Wadeye and its residents as not at all separate from modern capitalist society but intrinsically intertwined with it, with forces of cyborgian territorialisation and deterritorialisation constantly at play. One obvious site of this interconnection is the very physical presence of the Blacktip project. Its extractive infrastructure may be out of sight offshore and hidden behind locked gates, but it has still shaped (and is being shaped by) the land and sea. As Granjou et al write, we should acknowledge ‘shared *futures* of nature-culture entanglements’ ([11]: 9). One Wadeye resident expressed this entanglement in racialised terms, however his statement can also be read as a comment on the incursions of contemporary techno-capitalism into Indigenous life-worlds:

We black fellas are like the land. We have always been here, we are part of our country. White man and government is like water: it runs through our country, and sometimes brings good things, but sometimes it floods and destroys the country. But good or bad, that water always leaves a mark [90].



Blacktip’s Yelcherr gas processing plant (on left) and the town of Wadeye (on right). Source: Google Earth (2016).

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As previously mentioned, mass local employment was never promised nor delivered by the Blacktip project, and investment in community programs was short term. I understand this not as ENI’s moral failure, but something more matter-of-fact. ENI is not trying to correct the human redundancies constituted by this project. Instead, these redundancies are symbiotic with cyborgian flexibility and efficiency. To achieve optimality, not all territories and peoples implicated into a development need to be productively applied. Not each appendage of the cyborg need be in use for the corporate organism to thrive. Within

first terrifying when I feared for my own safety, and then depressing when I realised the violence was largely contained amongst Wadeye’s young people. Other signs of self-destructive violence were on display. Although Wadeye was a “dry” community with alcohol consumption banned (except for outsider permit holders), there was a social club 80 km away in Peppimenarti that served beer. Thus the Port Keats Road, the main dirt road to Darwin with Peppimenarti along the way, was littered with the wrecks of drunken vehicle accidents; the rusting piles of twisted cars and beer cans worked as a monument of unruly cyborg destruction, and a disruption to tidy narratives of sustainable, harmonious development.

an innovative techno-capitalist economy, some redundancy is productive. In this sense, the aims of ENI's local engagement and its 'community investment strategy' may best be understood not as community development, but as community containment.

Herein lies a clear synergy of corporate interests with government policy: the maintenance of acquiescent redundancy. In the absence of sufficient "real jobs", other technologies of placation are applied, such as disciplinarian welfare regimes, royalty payments, high-profile community grants and the sponsorship of sporting events. The rationale of these governmental technologies is exemplified by a surprisingly blunt statement on the AFL Northern Territory's website: 'The primary objective of ENI's support of AFL NT's activities in Wadeye is mitigation of the risk that the [Blacktip] Project causes significant increases in vandalism and theft, leading to rises in negative youth engagement with the police and the justice system' [91]. This is a startling admission of corporate and governmental paranoia: that perhaps the automated, cordoned operations of the Blacktip structure may cause *increases* in resentment and delinquency, rather than improved social cohesion through economic development.

A less obvious technology to promote acquiescent redundancy is displacement. In 2007, the Northern Territory's mining industry was booming, and the landscape around Wadeye was abuzz with construction workers and machinery from outside. Ten years on and the humans and machines involved in building Blacktip have long departed. From a management perspective, transitioning Blacktip's human labour force to redundancy was straightforward. When construction work finished, contracts simply ended, people were transported away, and any potential social conflict was dispersed.

The production model of ENI and its other sub-contractors is in line with the capital-intensive, "workforce flexibility" structure of the energy and mining sector in general, in which employment-related costs readily fluctuate and are generally less than ten percent of the industry's total expenditure.² The machines and money of this industry have been successful in establishing their autonomy from the interests of labour, and operate in a system that 'treats people as a source of inefficiency' ([94]: 301; 318–319). A downturn in global mineral ore markets since 2013 has led to many mining projects in the Northern Territory closing or slowing production, and employment in the industry has collapsed ([95]: 49; 54; [93]). This labour market volatility has been smoothed over by the regional effects of Japanese corporation INPEX's Ichthys gas mega-project near Darwin. However, construction on Ichthys is also now nearing completion, and this US\$34 billion project is expected to generate only a few hundred long-term employment positions [96,97].

The detrimental human effects of these industrial patterns, such as higher rates of mental health problems and suicide amongst the workforce (James, 2015; O'Connor, 2015) tend to be easily individualised and dispersed: industrial relations in this sector are increasingly dominated by casual employment contracts and intensive Fly In Fly Out (FIFO) working arrangements that tend to undermine workplace communalism and trade union membership (see for example [98,99]). As Donna Haraway writes, workers in the age of the cyborg are now 'made extremely vulnerable, able to be disassembled, re-assembled, exploited as a reserve labour force; seen less as workers than as servers' ([36]: 133).

The economy of northern Australia represents an outlier example

where, especially in its rural communities, private-sector market forces have largely proven incapable of providing more than patchy enclaves of employment and development ([4]: 29). This blatantly obvious structural shortcoming has been quietly conceded in corners of the bureaucracy. For example a review by the Australian Government's Office of Evaluation and Audit admitted that 'there are limited opportunities in most of the labour markets in which CDEP [Community Development Employment Projects, an Indigenous-focused community works program] operates' ([52]: 6). This holds for Wadeye, which remains highly reliant on government revenues for jobs and services. Yet there continues to be a deep dissonance between the material reality of projects such as Blacktip and the dominant policymaking imaginary of their effects.

4.2. The unruly cyborg: the heavy metal gangs of Wadeye

This methodological discussion of modern corporations and markets as cyborg assemblages risks deterministically portraying the cyborg as an impervious structure, inherently embedded in contemporary technocapitalism. This ignores the organic unpredictability of the cyborg, and the indeterminacy of revolutionary possibilities. To reiterate Deleuze and Guattari's analysis, the territorialisation of the assemblage is always countermanded by forces of deterritorialisation or 'lines of flight' from the hegemonic cluster ([31]: 2–12; 321–325). Donna Haraway similarly understands the cyborg not simply as capitalism's end-game colonisation of the body by computer, but as a partial and imperfect metaphor that holds the potential for 'some very fruitful couplings... [with] the two joined centers structuring any possibility of historical transformation' ([36]: 118; 127–128). The cyborg thus becomes a political project within the 'deadly game' of the modern world, 'about transgressed boundaries, potent fusions, and dangerous possibilities which progressive people might explore as one part of needed political work' ([36]: 121; 128). In short, the cyborg is a creature that may outlive capitalism.

I tentatively offer the heavy metal youth gangs of Wadeye as one example of the radical reinvention of the cyborg. During my time in Wadeye many aspects of this social phenomenon remained invisible to me (such as how formalised and organised "gang" membership was, what rituals these social groupings followed, and so forth). Thus the term "gang" may be its own foreign imposition. Despite this, a distinct version of youth rebelliousness was readily noticeable to me in Wadeye, expressed through gang-related graffiti tags, territorial claims over the town, and events of ritualised mass violence (such as rioting).

Other outside observers have identified over a dozen distinct gang groupings, with membership numbers (mainly of unemployed young people) likely in the hundreds – in this town of less than 3000 residents ([17]: 1). With the rise of their visibility has come an increase in governmental attention, in part because the gangs' activities are deeply inimical to a labour market-oriented rationality. One dominant reaction has been to treat the matter as a simple law-and-order issue, requiring more policing and authoritarian measures against juvenile delinquency [16,19,100]. Others have identified elements of tribal-related social support afforded by gang membership, but emphasise criminology-influenced remedial strategies (including of course vocational training and employment opportunities) to curb the gang-related dysfunction [17]. Yet others have treated the gangs and their heavy metal iconography with settler-colonial condescension, as a cultural curio object [20], or even as a quaint reflection of customary kinship groupings that 'show strong continuity with traditional Aboriginal social organisation' ([18]: 154).

² ENI no longer publish information in their annual financial statements related to employee costs, however in the 2010 Annual Report the company reported €4,785 billion of 'payroll and related costs', compared to net sales from operations of €98.523 billion, or less than 5% of net sales revenue [92]. This proportion is in line with employment-related expenditure of Glencore, another multinational mining corporation operating in the region. Glencore's 2015 financial statements report personnel costs of \$US5,287 million for its direct operations and \$US4,344 million for its consolidated industrial subsidiaries, compared to \$US170,497 million of reported revenues ([93]: 110; 154).



Car wreck on Port Keats Road. Author's photo circa 2008.

An alternative interpretation of these gangs emphasises their rebellious reinvention of cyborg rationality. This comes at the risk of romanticising the agency of these gangs – even using the term “gangs” may be its own form of romanticisation. There is also deep ambiguity as to whether gang members’ prevalent drug and alcohol abuse, violence (including gendered violence against women) and conflicts with police should be read as a counter-hegemonic project of rebellion, or as actions that reinforce the hegemonic power structures. (After all, a handful of full-time police officers *in situ*, a ready reserve of police at hand, and a prison complex in Darwin have thus far been sufficient to contain the rebelliousness of Wadeye’s young people.) Yet the unhinged insubordination of these groups, however imperfect in its political outcomes, does represent an assertion of ‘their autonomy from the state’s suffocating solicitude’ ([101]: 111).



Judas Priest album cover. Source: [102].

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I also treat the heavy metal symbology displayed by Wadeye’s young people not as coincidental, but as a disruption to facile interpretations of these social groupings as a phenomenon of reinvented traditionalism. Rather than archaic tribal totems, the gangs most commonly use reinvented cyborg images as their iconography: heavy-

metal guitars, piston-pumping machines, the modern Antichrist, steel phoenixes. This is not as a straightforward rejection of cyborg rationality, but perhaps a dangerous mutation of it ([36], 121) – arguably an expression of brazen modern survival and a refusal of passive victimhood [103].

5. Conclusions

This paper has positioned itself as a disruption to the hegemonic acceptance of carbon energy projects in northern Australia. Energy industry developments such as ENI’s Blacktip gas project are conventionally perceived by powerful social actors as part of a teleology of economic progress, whereby the margins of the nation are gradually being developed by industry. Instead, I argue it is useful to analyse industrial developments such as Blacktip as a cyborg assemblage, and constitutive of broader social power relations. The embodied metaphor of the cyborg offers a method for understanding seemingly disparate social phenomena – an energy industry project, the social marginalisation of a nearby Indigenous community, government’s training and employment policy, the presence of youth gangs, a global multinational corporation – as intrinsically interconnected and symbiotic.

I have not attempted to present the cyborg as a totalising theory of modern global society. There are also dangers in projecting cyborgian ontology as a universal mode of being. As I learnt from my time in Wadeye, many local residents may perceive a cyborg identity as a colonising concept, bifurcated from other living ecologies and in conflict with the reality of their own life-worlds. As a former neighbour of mine in Wadeye said to me one day, ‘We don’t wait for time; time can wait for us’ (5 March 2010). This perspective on temporality was in many ways incomprehensible to me, and challenged my own internalised cyborg logic about the march of development. It also hinted at social-ecological connections with kin and country that remain unmanageable by modern timeclock machines, out of the reach of cyborgian ontology. The cyborg metaphor does not explain all.

Regardless of its limitations, it is difficult to entirely dismiss the cyborg being as an important expression of modern life. Its presence as a foreign, colonising entity in settings like Wadeye may be uncomfortable, even blasphemous. Yet the cyborg is a powerful concept because it has been an effective coloniser, and is shaping body, behaviour and being even in Wadeye. The cyborg may not have been invited, but it has infiltrated.

By rendering the cyborg visible, one of my aims is to question aspects of power relations that are most often left unquestioned – such as the matter-of-fact benefits of energy projects like Blacktip. There is nothing inevitable about how this project operates, how its generated wealth is distributed, how government policy supports its operations locally, nor how it is reshaping the biosphere. To paraphrase Donna Haraway, there are creative and dangerous alternatives to the cyborgian status quo, and the hegemonic status of the modern corporation may yet cede territory to other social alternatives.

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