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Big Oil's duty of disgorging funds in the context of climate change

Marco Grasso

Introduction

That climate change is essentially a matter of justice is nothing new (Grasso, 2013). Philosophers and other scholars, as well as politicians, climate activists, religious leaders and many others have long highlighted and explored the numerous ethical considerations and challenges that are inseparable from discussions of the causes, consequences, and potential human responses to anthropogenic climate change (Grasso and Markowitz, 2015). A longstanding concern of climate justice has revolved around the question of “who counts” – that is, which individuals and groups should be at the centre of the ethical debate on climate change? What is the extent of ethical considerations in the context of long-term, global, anthropogenic climate change (Jamieson, 2014, Chapter 5)?

Beyond the predominantly state-centric perspective of the current international system, which basically considers states as the only agents of justice, there is a vigorous ongoing debate about other possible agents. For example, some environmentalist rhetoric focuses on the role of individuals, both in terms of reducing one's own emissions and for advocating larger-scale change. Although this perspective may have gained some traction in recent years, there are normative ethical questions about how much responsibility individuals do have for the harm caused by their (in the big picture, infinitesimal) GHG emissions, as well as positive ethical questions regarding individual responsibility given political and economic constraints on action (Markowitz et al., 2015). Therefore, it is necessary for climate justice to better explore forms of collective responsibility that do not exclude individual responsibility, but are rather able to integrate the two perspectives, with particular attention to novel or neglected collective agents of justice. Among these, given their unique and distinctive role, responsibilities, and duties in the context of climate change, oil and gas companies are possibly the most significant neglected group of agents. Big Oil – or “oil companies” or the “oil industry” – through the emissions generated by the fossil fuels they process, has significantly added to the increase of the concentration of greenhouse gases (GHG), especially carbon dioxide (CO₂) and methane (CH₄), in the atmosphere (IPCC, 2014a). Therefore, Big Oil has notably contributed directly to anthropogenic climate change.¹

It is worth stressing that this argument does not imply that Big Oil should become the only agent responsible for addressing climate change, or even that oil and gas companies are the most important players. It is not the intent of this chapter to obscure the role of other agents in climate politics. Consumers, civil society, businesses and other stakeholders all have a role and consequent responsibilities in addressing

climate change, and they should do their part. Rather, the goal of the chapter is to draw attention to the ‘supply-side’, in particular to oil and gas companies’ responsibilities and duties and the consequent implications for current climate action.

Big Oil should play its part in global climate governance, along with states, individuals, and other agents. That part is significant, since oil and gas companies have a crucial role in causing, shaping, advancing, and defending the current unsustainable fossil fuel-dependent global economy. By continuing to provide fossil fuels to feed the demand, they have been dictating the rules of the game to the global economic system. Based on these considerations, this chapter first outlines the direct contribution that Big Oil made to climate change in terms of global cumulative emissions. Then, it investigates the moral bases of the oil industry’s duty of disgorgement, i.e., a duty that implies rectification through relinquishment of funds for its wrongful actions. Finally, the chapter explores some practical issues and challenges that such duty of disgorgement entails for Big Oil.

Big Oil’s direct contribution to climate change

Recent studies by Richard Heede and colleagues focused on the contributions of the large carbon producers to global cumulative emissions of the major GHGs, such as carbon dioxide and methane (Heede, 2014; Frumhoff et al., 2016; Heede and Oreskes, 2016). “Carbon majors,” as these studies define the big carbon business, are the world’s largest public and private investor-owned, state-owned and government-run oil, gas, coal, and cement producers. The primary finding of Heede and colleagues is that 62% of the global industrial emissions of carbon dioxide and methane from 1751 to 2015 can be traced to the activities of 100 currently active carbon majors (41 public investor-owned companies, 16 private investor-owned, 36 state-owned and seven government-run) and eight non-extant ones.² Additionally, their data demonstrates that, given also the rapid global industrialisation of the last few decades, the 100 currently operating carbon majors have produced 71% of the global industrial emissions since 1988.³ A further study by Ekwurzel et al. (2017) extends Heede’s (2014) original finding by linking carbon majors’ fossil fuel-related activities to atmospheric carbon dioxide and methane *concentrations*, as well as to relevant climate impacts, namely, the *global mean surface temperature* (GMST) and the *global sea level* (GSL). Strikingly, this study found that the historical (1880–2010) and recent (1980–2010) emissions of 90 major carbon producers resulted in “~57% of the observed rise in atmospheric CO₂, ~42–50% of the rise in GMST and ~26–32% of GSL rise over the historical period of 1880–2010 and ~43% (atmospheric CO₂), ~29–35% (GMST), and ~11–14% (GSL) since 1980” (Ekwurzel et al., 2017, p. 579).

Importantly, carbon majors produced more than half of their emissions in the last 25 years, when the global community was already well aware of the potential dangers of climate change.⁴ This awareness spread widely after the First Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) in 1990, which announced the global scientific consensus on the negative effects of anthropogenic climate change.

Oil and gas companies are the largest and most numerous carbon majors. In this chapter, Big Oil is a shortcut for “the largest oil and gas companies” or, more precisely, despite the many terminological controversies that possibly reverberate the complexity of the oil world, this term includes those large multinational companies that engage in the exploration, production, refinement and distribution of hydrocarbons, i.e., “conventional oil”, “unconventional oil”, and “unconventional liquids.”

Generally, oil and gas are owned by states or, in weak and failed ones, by the subjects who exert irregular coercive control over them (Wenar, 2015). Yet, the oil industry is the conveyor that moves oil

and gas from below the ground irrespective of its ownership and localisation into the global economy. This industry comprises international oil companies (IOCs) and national oil companies (NOCs).⁵ IOCs are private entities whose business operations traditionally cover the full cycle from exploration, through production and refinement, to distribution of petroleum products. NOCs are by and large similarly structured, but they are fully or in the majority owned by a national government. The activities of the oil industry are divided into upstream operations of exploration and production, and downstream operations of refining and distribution. Given the high entry costs, the world's largest oil and gas companies are typically integrated, i.e., they carry out both upstream and downstream activities. Exploration includes prospecting, seismic and drilling activities that take place before the development of a proper oilfield; production involves the extraction of oil from below the ground through onshore and offshore drilling; refining concerns the separation of unwanted components in order to obtain clean hydrocarbons marketable into different usable products; finally, in the distribution phase such products are transferred to consumers through pipeline networks, tankers, railway tanks and trucks.

Big Oil's contribution to cumulative emissions of GHGs is, to an extent, impressive. The top 10 companies in terms of cumulative emissions of Heede's (2014) study all belong to the oil industry. The major 60 oil and gas companies contributed to more than 40% of global cumulative industrial emissions in the period 1988–2015; the top ten ones accounted for almost 22%, and the top 20 ones for more than 30%, as evinced by Table 19.1. The oil industry holds fossil fuel

Table 19.1 Big Oil's cumulative GHG emissions 1988–2015, MtCO₂e and % of global industrial GHG. Indeed, the largest share (roughly 90%) of oil and gas companies' global industrial GHG emissions originated from downstream combustion (for energy and non-energy purposes) of oil and gas that Big Oil distributed within the global economic system. These emissions are defined by the Greenhouse Gas Protocol of the World Resources Institute (WRI) as "SCOPE 3 EMISSIONS."

<i>Oil Company</i>	<i>Emissions</i>	<i>%</i>	<i>Typology</i>
Saudi Aramco	40,561	4.51%	NOC
Gazprom (Russia)	35,221	3.91%	NOC
National Iranian Oil	20,505	2.28%	NOC
ExxonMobil (USA)	17,785	1.98%	IOC
Pemex (Mexico)	16,804	1.87%	NOC
Royal Dutch Shell (UK/Netherlands)	15,017	1.67%	IOC
China National Petroleum	14,042	1.56%	NOC
BP (UK)	13,791	1.53%	IOC
Chevron (USA)	11,823	1.31%	IOC
PDVSA (Venezuela)	11,079	1.23%	NOC
Abu Dhabi National Oil	10,769	1.20%	NOC
Sonatrach (Algeria)	8,997	1.00%	NOC
Kuwait Petroleum	8,961	1.00%	NOC
Total (France)	8,541	0.95%	IOC
ConocoPhillips (USA)	7,463	0.83%	IOC
Petrobras (Brazil)	6,907	0.77%	NOC
Lukoil (Russia)	6,750	0.75%	IOC
Nigerian National Petroleum Corp	6,491	0.72%	NOC
Petronas (Malaysia)	6,185	0.69%	NOC
Rosneft (Russia)	5,866	0.65%	NOC
TOTAL 20 (Top 10)	273,559	30.41%	
	(196,629)	(21.86%)	

Source: Elaboration from The Carbon Majors Database – 2017 Dataset Release.

reserves that, if burned, will bring the planet well above the 2 degrees Celsius warming increase: to avoid exceeding that threshold, more than one-third of current oil reserves and one-half of gas reserves should, in fact, be kept in the ground (McGlade and Ekins, 2015).

The moral bases of the duty of disgorgement

The prominent role of Big Oil has important implications for climate change. As the evidence provided shows, the activities of Big Oil have *directly* and *profoundly* harmed the planet and humanity (IPCC, 2014a; Oppenheimer and Anttila-Hughes, 2016). For humanity, the effects of climate change have the consequence of threatening food security globally and regionally, increasing risks of food-borne, water-borne as well as vector-borne diseases, increasing displacement of people due migration, increasing risks of violent conflicts, reducing economic growth and poverty eradication, and the emergence of new poverty traps (IPCC, 2014b, pp. 17–21).

This generates the basis for the responsibility of oil companies: “do no harm” is, in fact, one of the clearest and strongest requirements of all notions of morality, which applies to any agents (Shue, 1999). Consequently, oil companies have the responsibility not to act in certain ways in order to prevent or avoid the harm caused by the emissions generated by their activities. Such responsibility provides moral grounds for modifying their behaviour accordingly. Specifically, it is argued that Big Oil has two primary duties: (1) the reduction of its harmful activities and (2) the rectification of the harm already done. These are the duties of decarbonisation and disgorgement, respectively.

Shue (2017) has already investigated the moral bases for grounding the duty of decarbonisation in view of major carbon producers’ transition towards non-carbon-based forms of energy, which is an important element of a large-scale change required from these corporations. This chapter focuses instead on the other, so far unexplored, moral aspect of this large-scale change, namely, the duty of Big Oil to rectify the harm done by disgorging funds.

To this end, it is necessary to first emphasise that Big Oil patently infringes on the negative responsibility of doing no harm: this violation assigns it a composite positive responsibility in the context of climate change.⁶ To establish and justify such compound positive responsibility, it is necessary to individuate the morally relevant facts (Ekwurzel et al., 2017; Shue, 2017). Such facts help clarify the conduct of oil companies, shape the moral context within which they operate and evince their intentions. The following morally relevant facts provide, therefore, the foundation for assigning composite positive responsibilities and the consequent duties to Big Oil necessary to meet the negative responsibility of doing no harm.

- 1 The major 60 oil and gas companies contributed to more than 40% of global cumulative industrial emissions in the period 1988–2015 (The Carbon Majors Database – 2017 Dataset Release).
- 2 Some oil and gas companies had a high level of internal scientific and technical expertise and were aware of the available scientific knowledge about potential harmful effects of burning fossil fuels for the global climate (CIEL, 2017).
- 3 Most of Big Oil’s emissions in the atmosphere were released between 1988 and 2015 (The Carbon Majors Database – CDP Carbon Majors Report, 2017).
- 4 Big Oil had the possibility to reduce the harmful effects of its business and to adjust its business model to become less carbon-intensive; some investor-owned oil and gas corporations had this opportunity since more than forty years ago (CIEL, 2017).

- 5 Leading investor-owned oil and gas companies actively opposed and, in many cases, successfully prevented policies towards GHG reduction and in some countries funded climate denial efforts (Oreskes and Conway, 2011; Frumhoff et al., 2016).
- 6 Oil and gas companies have made substantial profits that have greatly increased the wealth of their shareholders through their activities related to fossil fuels (Frumhoff et al., 2016; Wenar, 2016).

Fact 1 suggests that Big Oil has propelled climate change by exploring, producing, refining, distributing and burning fossil fuels. This fact already establishes causal responsibility, which is a necessary, yet not sufficient, condition for the more stringent notion of moral responsibility. Moral responsibility requires that the agent is aware of the consequences of its action, can form intentions about the action and can carry it out (Miller, 2004). At least since the first IPCC report of 1990, Big Oil knew about the harmful consequences of its business model (Fact 2). Despite this knowledge, the oil and gas companies released most of their emissions in the past three decades (Fact 3), when they were able to limit those harmful actions (Fact 4). In addition, some oil and gas companies intentionally blocked initiatives to address climate change and funded climate denial activities (Fact 5). All oil and gas companies accumulated substantial amounts of wealth through their fossil fuel-related activities (Fact 6). In sum, these facts provide a justification for assigning Big Oil moral responsibility for climate change.

It is necessary to further specify that it is possible to assign oil and gas companies “collective” (moral) responsibility. They are, in fact, conglomerate collectivities, whose “identity is not exhausted by the conjunction of the identities of the persons in the organization” (French, 1984, p. 13). Conglomerate collectivities have the following features: (a) an identity larger than the sum of the identities of their members; (b) decision-making structures that enable the inputs of members’ judgements to be translated into collective judgements as outputs; (c) consistency over time; and (d) self-conception as a unit. Accordingly, oil and gas companies are indeed conglomerate collectivities, which can qualify as moral agents and, therefore, can have different forms of responsibility.

The duty of disgorgement intends to guarantee that oil and gas companies rectify the injustice towards those who undeservedly suffered the harm they generated (Vanderheiden, 2011; Shue, 2015). This duty posits that oil and gas companies should “disgorge” part of the money they accumulated by benefitting from their harmful activities to help the “victims” to prevent or adapt to climate impacts, and to compensate those non-adapted or mitigated.

To specify its moral features, it is useful to frame Big Oil's duty of disgorgement through a corrective justice perspective. It requires to identify (1) the moral basis of the injustice, i.e., the moral principles that justify and define rectificatory actions; (2) the types of rectificatory actions required; (3) the forms that rectificatory efforts should take, i.e., the specific actions through which rectification of harm done should be carried out; and (4) the duty recipients, i.e., the subjects entitled to rectification and the modality of the allocation of the rectificatory actions among them envisaged by the duties individuated (Caney, 2006, p. 465).

The moral principles of the duty of disgorgement

The moral justification of rectificatory actions in the context of climate change is usually provided through two backward-looking principles – the “polluter pays principle” (PPP) and the “beneficiary pays principle” (BPP), and a forward-looking one, known as the “ability to pay principle” (APP) (Caney, 2005; Shue, 2015).⁷ These principles are generally used independently, even if they in fact all aim at establishing and justifying positive responsibilities for sharing the burden

of rectifying the unjust situation created by the actions that produced climate change. This chapter instead espouses the hybrid version developed by Shue for providing a moral argument for climate change action based on these principles. The convergence of the three principles seems to provide appropriate composite moral bases that justify Big Oil's duty of disgorgement (Shue, 2015). Shue (2015, p. 16) argues that "those who contributed heavily to creating the problem of excessive emissions thereby both benefitted more than others and became better able to pay than most others." This is the case of Big Oil. Therefore, the PPP, BPP and APP morally justify oil and gas companies' duty of disgorgement and originate in different ways the related rectificatory actions.

The structure of the duty of disgorgement

Big Oil must rectify the harm its activities generated by supporting affected people. There are different ways to support them, from immaterial approaches, like public acknowledgement and apologies, "naming and shaming," or providing a genuine account of climate change and its implications through, for instance, the establishment of a truth commission (Rotberg and Thompson, 2000), to material rectification of historical wrongdoing (Goodin, 2013; Goodin and Pasternak, 2016). In the context of climate change many practical matters to address its harmful impacts are necessary. Rectification, therefore, must be mainly material and must aim at minimising climate impacts through practical actions.

Given the complexity of climate change, restitution (returning misappropriated things to the rightful owners or their successors) and compensation (compensating the rightful owners or their successors for the harm done) as forms of material rectification are highly problematic, since they both require that the recipient of the rectificatory action be specifically identified (Goodin, 2013). Given substantial temporal and spatial lags between carbon emissions and their impacts, it is almost impossible to identify the rightful recipient or a legitimate successor with certainty.

While restitution and compensation fail, disgorgement seems to be a more useful approach. Disgorgement requires only the relinquishment of the "fruits of historical wrongdoing"; in the case of Big Oil, the "tainted benefits" of its fossil fuel-related activities. Unlike restitution and the even more demanding compensation, the disgorgement form of rectification focuses on the duty bearer and not on the duty recipient and their welfare (Goodin, 2013). Disgorgement does not require the identification of a particular duty recipient, or assumptions over how they would be today had the past wrong not occurred. Therefore, the potential and the advantage of disgorgement lie in its informational parsimony that makes it much more feasible, especially in the complex situations created by climate change.

It is important to note that not all benefits that are ascribable to Big Oil's historical wrongdoing should be viewed as "tainted." Profits are a theoretical proxy and a sound pragmatic measure for oil companies' tainted benefits. In the case of Big Oil, the notion of wrongdoing reasonably applies to their fossil fuel-related activities undertaken after 1990, as previously mentioned. After 1990, their ignorance about the consequences of carbon emissions and alleged impotence of oil and gas companies to reduce their contribution becomes inexcusable. Profits of Big Oil since 1990 can be therefore understood as a practical measure of the tainted benefits that they should disgorge.

The indication of the form that rectificatory actions should take

In practical terms, disgorgement can take the form of a fund similar in its objectives to the Earth Atmospheric Trust envisaged by Barnes et al. (2008) for financially supporting people affected by climate change and most socially vulnerable to its impacts. This fund should be gradually replenished through the profits disgorged by oil and gas companies, as explained below.

The individuation of duty recipients

A further specification of the duty of disgorgement and a fundamental issue of corrective justice requires identifying those among whom the disgorged funds should be distributed. In relation to climate change, agents who are most socially vulnerable to its harmful impacts are the rightful duty recipients. The degree of vulnerability can be used for defining their level of entitlement to the disgorged funds: the greater the vulnerability, the larger the rectification through disgorged funds. A stringent normative imperative of putting the most vulnerable first is given by Shue's third general principle of equity (Shue, 1999). This principle, known as "guaranteed minimum," states that those who have less than enough for a decent human life should be given enough resources and means for living decently. In this light, being vulnerable indicates being deprived and having far less than enough. More vulnerable agents, therefore, should be given the rectification means (the funds, in this case) necessary to attain a level sufficient for them to cope with, and to recover from, climate impacts.

Practical issues and challenges of the duty of disgorgement

The strong moral imperative outlined here that requires Big Oil to disgorge funds that are the fruit of historical wrongdoing should be translated into practical steps in order to bring about a more just arrangement of global climate governance. In this light, a number of practical issues related to the duty of disgorgement require clarification.

First, there is the issue of the form disgorged funds should take. More specifically, if the international community accepts the duty of disgorgement, how should the process be organised and managed? Theoretically, as underlined in the previous section, the disgorged funds should go back to an impersonal common pool to be allocated to most vulnerable people. However, it seems impossible that oil and gas companies relinquish all the profits made since 1990 until today. This would shatter the financial stability of the oil industry and even of some states, and severely disrupt the international order. The only feasible alternative is to use current, ongoing profits. However, also in this case, to avoid immediate bankruptcy of oil and gas companies, it is necessary to proceed gradually. Initially, these companies should disgorge only the portion of current profits usually employed for paying dividends to shareholders or investing in the exploration and development of new locations for fossil fuels, and retain the rest. Gradually, over the next decades, oil and gas companies should come to disgorge all current profits.

Second, it is important to clarify how vulnerability should be understood and employed to serve as a useful criterion for disgorging funds. Intuitively, the most appealing benchmark seems to be a notion of vulnerability intended as the degree to which agents are susceptible to, or unable to cope with, negative impacts of climate change. However, such *biophysical* notion of vulnerability alone does not give any information on the ability of peoples and communities to deal with climate change and cannot be a conclusive referent for the allocation of funds, which must be directed specifically for coping with climate impacts (Kelly and Adger, 2000; O'Brien et al., 2004). To this end, it is more useful to adopt a notion of *social* vulnerability defined as a state of wellbeing pertaining directly to individuals and social groups, whose causes are related to social, institutional and economic factors, such as poverty, class, race, ethnicity, gender, etc., as well as to climate impacts (Paavola and Adger, 2006; Grasso et al., 2014). Such notion of social vulnerability would also have the further advantage of being practically measurable at the community level through an opportune index framed in terms of different basic determinants, for instance economic welfare, social wellbeing, infrastructure and technology, and the structure of the economy (Grasso et al., 2014). In brief, for distributing disgorged funds among more vulnerable agents, an index of social vulnerability should be used.

Third, despite the moral robustness of Big Oil's duty disgorgement, taking action to hold them responsible for their historical wrongdoing poses unprecedented challenges for several reasons. The general recognition and self-perception of oil and gas companies as the corporate entities first and foremost responsible for the climate crisis may be problematic. Pre-philosophical common-sense morality would suggest that other businesses (e.g., automotive, chemical or construction industries) are also similarly responsible for climate change, as they also continued the use of fossil fuels after the consensus on the harmfulness of carbon emissions was established. To address this challenge, it is necessary to further emphasise the unique role of Big Oil in the current socio-economic system. Oil and gas companies are the corporate entities that have been dictating the rules of the game in terms of reliance on fossil fuels to other businesses. Through their informed choice to continue the extraction, refinement and distribution of fossil fuels in the 1990s, Big Oil created a dependency of other industries, which had to shape their business models around fossil fuels. Therefore, oil and gas companies should be considered the primary duty-bearers. Other industries, which depend on the supply from oil companies, should be attributed fossil fuel-related duties only after the "rule shapers" (i.e., Big Oil) have met theirs. Identifying Big Oil as a stand-alone group, with very particular and unique moral responsibilities, is crucial to advancing the efforts to combat climate change. This recognition, in turn, should prompt the emergence of a new social norm delegitimising Big Oil's behaviour. Deligitimisation of once deeply socially entrenched practices and behavioural patterns through a change in social norms has happened in the past (e.g., slavery, tobacco). The recognition of the activities of Big Oil as morally inadmissible should favour the global acceptance of the duty of disgorgement and to its actual operationalisation.

The disruptive nature of the process of holding oil and gas companies responsible and accountable for their actions poses a further major practical challenge. This issue lies in the novelty of the problem. States have been the main units of international action against climate change for decades. Holding private and more generally non-state agents accountable for their harmful activity usually falls within the jurisdiction of national and international courts. Recognising oil and gas companies from different countries as morally responsible for climate change, as a group and as individual entities, capable of disgorging funds for their historical wrongdoing, would set a precedent and disrupt the status quo of the international system. There is no existing institutional structure which could accommodate the new arrangement and facilitate the disgorgement process. Creating a new structure to collect and manage disgorged funds would raise questions about justice and legitimacy, the mode of participation and the extent of private agents' obligations and rights. Yet, it seems the only viable solution. Moreover, having a state-centred system that imposes constraints and conditions onto business entities would also challenge the dominant paradigms on the role of the state. These are specific about the role of the state and its relationship to business, permitting little infringement of corporate autonomy under a "business-as-usual" scenario. Even though climate change is not business-as-usual, there is likely to be a strong resistance against the idea of states dictating that the most powerful global corporations share substantial parts of their profit (and gradually all of it) for moral reasons, because "it is the right thing to do."

This introduces another critical challenge, a motivational problem. In some instances, there is the problem of the most influential shareholders and board members, who are interested in maintaining a business-as-usual approach for self-interest reasons, controlling the activities of oil and gas companies. These behaviours should be condemned on moral grounds, since they prioritise the wealth and power of few over the lives, health and wealth of many. However, it is not always a clear-cut case of greed against virtue. A blurry line between private and public interests and ownership structures – i.e., IOCs vs. NOCs – in many oil and gas companies complicates the matter since fossil fuel exports strongly affect the development of several natural resource-dependent economies, like Saudi Arabia, Russia, and Brazil. Resistance to any attempts to dissolve a corporation,

which is the primary source of economic growth and of fiscal revenue, is inevitable since such actions would directly endanger the economies of these states.

Conclusions

Recently, scholars have started to address the ethical issues raised by climate change also from a descriptive rather than an exclusively normative perspective. This growth and widening of climate justice seems critical to bridge the gap between positive and normative theorisation and real-world climate decision-making. In this regard, this chapter offers a novel ethical inquiry into the (thorny) notions of responsibilities and duties of non-state, collective agents of justice – oil and gas companies – with significant implications for a world severely threatened by climate change (Brown and Caldeira, 2017).

This study was prompted by the general disregard of Big Oil's responsibilities and duties in climate change. It seems, in fact, that the international community is ignoring the elephant in the room of the global climate debate. Failure to engage these agents is particularly evident in the light of the constant shortage of financial resources to combat climate change. Oil and gas companies are directly responsible for the problem and financially capable of assisting in the global climate change efforts. The normative analysis carried out indicates and clarifies the moral role of oil and gas companies; the ensuing descriptive analysis addresses some practical issues concerning the operationalisation of their duty of disgorgement. Altogether, this work emphasises that the inclusion of Big Oil among the direct agents of climate justice can propel global collaboration on climate change by adding the necessary resources to pursue the ambitious goals set by the Paris Agreement, and distributing such resources in a more equitable manner than in the current international system.

Notes

- 1 The official definition of anthropogenic climate change can be found at article 2 of the 1994 United Nations Framework Convention on Climate Change – UNFCCC (http://unfccc.int/key_documents/the_convention/items/2853.php).
- 2 The emissions traced to carbon majors are calculated based on the carbon content of fuels marketed (subtracting non-energy uses), CO₂ from cement production process, CO₂ from flaring, venting, own fuel use and fugitive or vented CH₄.
- 3 According to Heede's figures, the top emitters and the large majority of producers are fossil fuel corporations (IOCs, NOCs and coal companies), whereas cement producers are a small minority among carbon majors. The original 2014 database, for instance, included only seven cement producers whose emissions amounted to 1.45% of carbon majors cumulative total (Heede, 2013, Table 4, p. 17). The moral analysis of this chapter is applicable only to the still existing oil and gas companies, since in the case of climate change the attribution of responsibilities for rectifying the harm done to non-existing entities is not possible according to the relevant literature of climate ethics (e.g., Caney, 2006).
- 4 833 Gt CO₂ (50.4%) of the emissions associated with carbon majors' activities were produced since 1988, whereas 820 Gt CO₂ (49.6%) in the period between 1750 and 1987 (The Carbon Majors Database – CDP Carbon Majors Report 2017, p. 7). More generally, Heede (2014, p. 234) claims that "[O]f the emissions traced to carbon major fossil fuel and cement production, half has been emitted since 1986."
- 5 This analysis excludes two other typologies of oil and gas companies, given their irrelevance in terms of contribution to global GHG emissions: the so-called independents, smaller companies that operate only in the upstream segment of the oil industry's operations, and oilfield service companies that provide services and outsourcing needs to the oil industry.
- 6 "If one does contribute to harm, in violation of the negative responsibility, it becomes one's positive responsibility to correct it – and perhaps compensate for it as well" Shue (2017, p. 593). In other words, responsibility can be "negative" and compel agents not to act or "positive" and demand that agents act in certain ways: generally, the first kind of responsibility provides the moral basis for and "triggers" the second kind.

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- 7 The PPP distributes the financial and other burdens associated with rectificatory actions in proportion to past contributions that agents have made to the overall level of emissions. The BPP holds instead that proportionality in such distribution should be calculated on the basis of the benefits that agents have derived from activities generating emissions. The APP posits that the quota of burdens should be proportional to the agents' relative capacity to bear such burdens (Caney, 2005; Shue, 2015).

References

- Barnes, P., et al. (2008) 'Creating an earth atmospheric trust', *Science*, vol 319, no 5864, pp 724–724.
- Brown, P. T. and Caldeira, K. (2017) 'Greater future global warming inferred from Earth's recent energy budget', *Nature*, vol 552, no 7683, pp 45–50.
- Caney, S. (2005) 'Cosmopolitan justice, responsibility, and global climate change', *Leiden Journal of International Law*, vol 18, no 4, pp 747–775.
- Caney, S. (2006) 'Environmental degradation, reparations, and the moral significance of history', *Journal of Social Philosophy*, vol 37, no 3, pp 464–482.
- CDP (2017) *The Carbon Majors Database – CDP Carbon Majors Report 2017*. www.cdp.net/en//articles/media/new-report-shows-just-100-companies-are-source-of-over-70-of-emissions.
- CIEL (Center for International Environmental Law) (2017) *Smoke and Fumes. The Legal and Evidentiary Basis for Holding Big Oil Accountable for the Climate Crisis*. CIEL, Washington, DC, and Geneva.
- Ekwurzel, B., Boneham, J., Dalton, M. W., Heede, R., Mera, R. J., Allen, M. R., and Frumhoff, P. C. (2017) 'The rise in global atmospheric CO₂, surface temperature, and sea level from emissions traced to major carbon producers', *Climatic Change*, vol 144, no 4, pp 579–590.
- French, P. A. (1984) *Collective and Corporate Responsibility*. Columbia University Press, New York.
- Frumhoff, P. C., Heede, R., and Oreskes, N. (2016) 'The climate responsibilities of industrial carbon producers', *Climatic Change*, vol 132, no 2, pp 157–171.
- Goodin, R. E. (2013) 'Disgorging the fruits of historical wrongdoing', *American Political Science Review*, vol 107, no 3, pp 478–491.
- Goodin, R. E. and Pasternak, A. (2016) 'Intending to benefit from wrongdoing', *Politics, Philosophy & Economics*, vol 15, no 3, pp 280–297.
- Grasso, M. (2013) 'Climate ethics: With a little help from moral cognitive neuroscience', *Environmental Politics*, vol 22, no 3, pp 377–394.
- Grasso, M. and Markowitz, E. M. (2015) 'The moral complexity of climate change and the need for a multidisciplinary perspective on climate ethics', *Climatic Change*, vol 130, no 3, pp 327–334.
- Grasso, M., Moneo, M., and Arena, M. (2014) 'Assessing social vulnerability to climate change in Samoa', *Regional Environmental Change*, vol 14, no 4, pp 1329–1341.
- Heede, R. (2013) *Carbon Majors: Accounting for Carbon and Methane Emissions 1854–2010*, Methods and Results Report.
- Heede, R. (2014) 'Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers', 1854–2010', *Climatic Change*, vol 122, no 1–2, pp 229–241.
- Heede, R. and Oreskes, N. (2016) 'Potential emissions of CO₂ and methane from proved reserves of fossil fuels: An alternative analysis', *Global Environmental Change*, vol 36, pp 12–20.
- IPCC (2014a) *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate*. Cambridge University Press, Cambridge and New York.
- IPCC (2014b) *Working Group II, Impacts, Adaptation, and Vulnerability, Synthesis for Policy Makers*. www.ipcc.ch/pdf/assessment-report/ar5/wg2/ar5_wgII_spm_en.pdf
- Jamieson, D. (2014) *Reason in a Dark Time: Why the Struggle Against Climate Change Failed – And What It Means for Our Future*. Oxford University Press, New York.
- Kelly, P. M. and Adger, W. N. (2000) 'Theory and practice in assessing vulnerability to climate change and facilitating adaptation', *Climatic Change*, vol 47, no 4, pp 325–352.
- Markowitz, E. M., Grasso, M. and Jamieson, D. (2015) 'Climate ethics at a multidisciplinary crossroads: Four directions for future scholarship', *Climatic Change*, vol 130, no 3, pp 465–474.
- McGlade, C. E. and Ekins, P. (2015) 'The geographical distribution of fossil fuels unused when limiting global warming to 2°C', *Nature*, vol 517, no 7533, pp 187–190.
- Miller, D. (2004) 'Holding nations responsible', *Ethics*, vol 114, no 2, pp 240–268.

- O'Brien, K., Leichenko, R., Kelkar, U., Venema, H., Aandahl, G., Tompkins, H., Javed, A., Bhadwal, S., Barg, S., Nygaard, L., and West, J. (2004) 'Mapping vulnerability to multiple stressors: Climate change and globalization in India', *Global Environmental Change*, vol 14, no 4, pp 303–313.
- Oppenheimer, M. and Anttila-Hughes, J. K. (2016) 'The science of climate change', *The Future of Children*, vol 26, no 1, pp 11–30.
- Oreskes, N. and Conway, E. M. (2011) *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues From Tobacco Smoke to Global Warming*. Bloomsbury Publishing, New York.
- Paavola, J. and Adger, W. N. (2006) 'Fair adaptation to climate change', *Ecological Economics*, vol 56, no 4, pp 594–609.
- Rotberg, R. I. and Thompson, D. (Eds.). (2000) *Truth v. Justice: The Morality of Truth Commissions*. Princeton University Press, Princeton.
- Shue, H. (1999) 'Global environment and international inequality', *International Affairs*, vol 75, no 3, pp 531–545.
- Shue, H. (2015) 'Historical responsibility, harm prohibition, and preservation requirement: Core practical convergence on climate change', *Moral Philosophy and Politics*, vol 2, no 1, pp 7–31.
- Shue, H. (2017) 'Responsible for what? Carbon producer CO₂ contributions and the energy transition', *Climatic Change*, vol 144, no 4, pp 591–596.
- Vanderheiden, S. (2011) 'Globalizing responsibility for climate change', *Ethics & International Affairs*, vol 25, no 1, pp 65–84.
- Wenar, L. (2015) 'Coercion in cross-border property rights', *Social Philosophy and Policy*, vol 32, no 1, pp 171–191.
- Wenar, L. (2016) *Blood Oil: Tyrants, Violence, and the Rules that Run the World*. Oxford University Press, New York.