

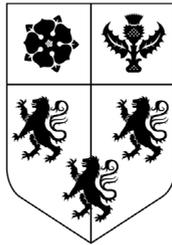


The Pembroke Academic Journal

VOLUME 1 - 2023

The Pembroke Academic Journal

Volume 1



Year 2023

Founded by
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With the support of
Pembroke College
Academic Committee,
Governing Body,
&
3CR Initiative

ISSN 2753-572X

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On the Shoulders of Giants

“Standing on the shoulders of giants and seeing farther. Seeing into the invisible, across space, through time.” When I was a kid, there was this radio show every Saturday morning telling the stories of historic discoveries in the field of Biology. Focussing on a subject, Dr Jean-Claude Ameisen would detail where recent scientific works come from, usually starting with the words of ancient philosophers. This show, *Sur les épaules de Darwin*, made me fall in love with my field. It introduced me to the perspicacity of Oliver Sacks’s writing. It showed me that there were many more things to discover, and that subjects are nothing but fractals, each containing their own universes of extremely niche topics.

I ended up studying Neurosciences, as I was always drawn to one of its niche aspect: sleep. What are dreams? Why do we dream? Are these questions the right ones to ask, when talking about such a paradoxical, elusive state? I can only consider these because I am standing on the shoulders of giants. Giants who first thought that sleep

was akin to death. Giants who then discovered that sleep was fragmented, and that part of it was not that dissimilar to wake. Giants who, I assume, were mere humans, relying on previous discoveries and observations to cast their groundbreaking theories. Humans who had to start somewhere. Who were taught by their peers or by themselves. Students.

This is the very first instalment of a peer-reviewed academic publication showcasing the work of an academic community studying a wide range of subjects. The creation of this journal was a journey that started in 2022 in Pembroke College’s very own Café. It persisted through the hard work of its editor, but would not exist without the contributions of the authors and their reviewers.

This journal is our little giant, and I invite you to stand on its shoulders.

B.J.B. Bréant, August 2023

Godless Morality: A Response to Divine Command Theory and Adams' Modification

Benjamin Kane

The work of Robert Adams has recently brought the theistic conception of “Divine Command Theory” back into the mainstream of religious ethics. Adams builds on the claim of traditional divine command theory, which is a series of biconditionals linking the obligation and moral goodness of an action to the command of God. This article explores both the traditional conception of divine command theory and Adams' modification, first by examining how the existence of normative ethical facts undermines the idea that God is the grounding of moral facts, and second by discussing the theological repercussions of assuming God's characteristics of loving kindness. In concluding that there exist normative reasons to behave which provide the groundwork for ethical facts, this article provides a direct challenge to the basis of traditional divine command theory, which necessarily negates the existence of metaphysically grounded ethical facts for the purpose of making God the sole arbiter of what can be morally acceptable. In making these objections to both traditional and modified divine command theory, this article argues that what is morally acceptable is contingent upon normative reasons outside of God for permissible behaviour.

Divine command theorists claim that actions are morally “wrong” in that they go against the command of God, a principle that intrinsically links morality with the command of God. I argue that morality is not intrinsically dependent on divine mandate— that is, no action gains a moral or immoral quality solely from whether it is commanded

or forbidden by God. I begin by introducing traditional divine command theory, which can be traced back to the writings of St. Augustine and Duns Scotus, and then RM Adams' modified divine command theory, which is a subtle but important reimagination of the original divine command theory. I then entertain a few major objections within two related yet distinct themes: that moral obligations to commit or not commit certain acts exist independent of the command of God, and that there are certain ethical facts which presuppose God's commands and would still hold even without God. I argue that despite Adams' attempts to solve a major problem of traditional divine command theory through his modified version, this adaptation is not sufficient in strengthening the tenets of divine command theory due to its inability to accommodate for the existence of normative ethical facts.

Divine Command Theory and the Adams Modification

The tradition of divine command

theory has roots in ancient theologians, who grounded ethical rightness and wrongness solely on the wishes of God. Duns Scotus based his divine command theory tradition on two premises: first that loving God is done through obedience to God, and second that the moral obligation to love God is necessary. Through these two premises, Scotus asserted that humans, in order to love God, had to *obey* God, and because that love was necessary, all humans had the ethical obligation to obey God (*Ordinatio III*, suppl. distinction 37). Through this ethical obligation to obey God, Scotus' theory of divine command can be articulated: ethical rightness through an understanding of our moral obligations could only be achieved through obedience to God. Traditional divine command theory, as put forward by Scotus and reiterated through Plato and Augustine, can be seen as this very basic understanding that there were no groundings of moral obligations outside of God. All moral obligations can thus be understood as obedience to divine command.

The endorsement of divine

command theory throughout history by philosophers and theologians has not shielded it from fundamental objections to the concept of grounding ethical facts on the wishes of God. One particular problem divine command theory faces is articulated by Socrates in Plato's *Euthyphro* and is referred to in the literature as the "Euthyphro Dilemma". The essential question of the Euthyphro Dilemma is whether a pious object or trait is loved by the divine because it has this quality of piety, or whether it has the quality of piety because it is loved by the divine. Divine command theory in the traditional sense faces the Euthyphro dilemma since it is unclear as to whether what we are morally obligated to do from God gets its ethical rightness from God's commands or whether it is commanded by God because it is ethically right in the first place. In essence then, divine command theory fails to tell us whether there are intrinsic ethically right qualities about a moral obligation that we get from God, or whether those ethically right qualities come from the moral obligation of obedience to God.

An issue that emerges as part of the Euthyphro Dilemma is the question of whether we would be obligated to follow the commands of a divine being that demands cruelty for its own sake. One traditional response to this objection to divine command theory would be that the God of classical theism, being omnipotent, omniscient, and omnibenevolent, would never command cruelty for cruelty's sake alone: all things that we, as humans, would interpret to be cruel have a greater benefit to ourselves or the world that we are unable to comprehend at that moment. That is, the classical theist could claim that it is not *logically possible* for God to make this command because it is incongruent with who or what God is. However, this is not a stance held by all classical theists. Robert Adams, a theist who wrote extensively on divine command theory and introduced a modified version of the theory to accommodate for major issues the traditional stance faces, assumed the logical possibility of the God of classical theism commanding cruelty for the sake of cruelty alone, and that therefore if God commanded cruelty for its own

sake, divine command theory would make acting in accordance with this command morally obligatory. Thus, divine command theory necessarily embraces the second horn of the Euthyphro Dilemma, meaning that anything is morally permissible as long as it is commanded by God.

To counter the issues faced by the question of commandment of cruelty for cruelty's sake, which Adams referred to as the "gravest objection to the divine command theory of ethical wrongness" (1981), Adams put forward a modified version of traditional divine command theory. He begins with an introduction of a very basic framework of divine command theory via two statements: statement (1) being "it is wrong for A to do X" and statement (2) being "it is contrary to God's commands for A to do X" (1973). He is careful to note that statement (2) is metaphysically prior to statement (1), which means that we can understand divine command theory as being if an action is contrary to the commands of God, then it is wrong for a person to do that action. Adams modified traditional divine command theory by the presupposition of certain

qualities of God and argued that actions achieve a state of ethical rightness or wrongness in their accordance with the desires of a *loving* God.

Adams modifies divine command theory for the purpose of responding to the question of commandment of cruelty for cruelty's sake. As previously mentioned, Adams assumes that it is logically possible for the God of classical theism to command cruelty for cruelty's sake, and he also upholds traditional divine command theory in the sense that it being 'wrong' to commit an action implies that it would be against the wishes of God to commit this action. Ultimately, Adams is not claiming that God couldn't possibly command cruelty for cruelty's sake, but that God wouldn't— God chooses *not* to command cruelty for cruelty's own sake despite being logically capable of doing so. Therefore, Adams' modified divine command theory states that the ethical rightness of an action can be determined in accordance with the wishes of a *loving* God, as God being loving is one of God's intrinsic traits (aligning with the notion of

divine omnibenevolence). Although it is not logically impossible for God to command someone to commit cruelty for the sake of cruelty alone, Adams argues, it would result in a breakdown of our entire ethical system as it contradicts the assumption of a loving God. Another reason why Adams modifies the divine command theory in this way is that the command of a God who loves humanity inspires us to act in certain ways in devotion to the commands of God. In this sense, Adams argues that God's characteristics strengthen our obligation to follow God's commands, and our loyalty to God comes from God's paternalistic, loving attitude towards us. Importantly, God is not required to be loving, but the fact that God is loving, as well as all these other positive characteristics, Adams suggests, means that we are obligated to provide loyalty and obedience to God through the fulfillment of God's commands.

For the modified divine command theorist, what makes an action morally right or wrong is therefore determined by whether the action is in accordance or contrary to

the command of God, who has certain presupposed principles. Adams defines moral obligation as something that "grounds reasons for action" (2002). Despite the modification that Adams makes for the purpose of providing a stronger ethical basis for action, the modification still holds that we have no good reason to act morally outside of divine commands. The divine command theorist would argue that all reasons for action, and therefore all moral obligations, come from the commands of God, and I argue that this is where divine command theory goes awry. A central premise of divine command theory is that there is no objective morality outside of God— there are no sources of moral obligation that are not God. I argue that despite Adams' attempt to make divine command theory more morally digestible by inserting a clause about God's assumed nature — that is, we can presuppose God being loving in order to prevent the ethical conundrum that arises from the potential of God commanding us to commit cruel acts for no sake other than cruelty — divine command theory still fails in that it presents a monist constitution of

moral obligations. My argument against the assumption of monist ethical accounts both considers the existence of moral obligations outside of divine command and the existence of normative ethical facts that provide us with moral duties whether or not God commanded them in the first place. These themes tie together to create a holistic understanding of where the divine command theory fails in grounding morality in God.

Moral Obligations Outside of Divine Command

The primary objection, and the one that I will defend in this paper, to Adams' modified divine command theory is that it is incoherent to suggest that the only moral obligations which exist are ones that come from God's commands, and that either through the existence of normative ethical facts or non-divine obligations, individuals find moral goodness to be derived from sources that are simply not rooted in the commands of God. These moral obligations can be understood in multiple ways. The

first moral obligation outside of divine command that can be adopted is through moral obligations which are derived from normative ethical facts. The argument for the existence of normative ethical facts claims that actions that would result in the pain and suffering of others are ones that we know to be morally wrong without having to appeal for divine assistance. The normativist would claim that there have always existed certain ethical facts and the existence of those facts are not contingent upon God instantiating them. This theme is the primary objection to the divine command theory posed by Ralph Cudworth, who states that certain ethical facts were true before God created laws for them (2014). That it is wrong to murder another individual was an ethical truth, this argument goes, before God imposed any laws mandating against these actions.

The claim to the existence of normative ethical facts both serves the purpose of solving the Euthyphro dilemma and taking ethical rightness out of the purview of God. This interpretation does not necessarily claim that God does

not make ethical commands: it is still perfectly within the power of the God of traditional theism to command specific behaviours from someone and for those behaviours to be ethically right. However, the ethical rightness of these behaviours commanded by God are not right *because* they are commanded by God but rather because they always have been, and God's command does not change the ethical value of this action.

I defend the notion that there exist normative reasons to commit or not commit specific behaviours, which we derive outside of any divine command. Divine command theorists assert that an act is morally reprehensible in that it goes against the commands of God and therefore God is violated when someone commits such an act. However, this is a reductive and non-personal way of thinking about how our actions impact others: namely, the divine command theorist is incapable of thinking of individual people who are impacted by immoral actions as their own ends, rather than simply means to the end of obeying God. By asserting that there are normative

reasons to act ethically, we act out of accordance with the understanding that individuals are their own ends who necessarily deserve freedom and autonomy. For instance, torturing someone restricts their freedom, violates their personal autonomy, and subjects them to awful suffering that provides no major benefit. Torture *could* be immoral because God commands us not to commit this type of act in Leviticus, and it certainly could strengthen the conviction of a religious person who believes that the act is immoral for both theistic and non-theistic reasons, but the fact that God commands us to not commit this act does not provide the foundation for the immorality of the act — normative reasons have made it such that this act is immoral.

I argue that it is impossible to consider individuals as their own ends when acting under divine command theory. Those who do good things unto others do so, at least in part, because it is commanded to them by God, not because they see the other individual as entirely deserving of this good deed or treatment. As such, those who

adopt monist ethical constitutions and obey moral commands because of them being issued by God find themselves treating others ethically (according to God) for the end of achieving favour in the eyes of God. There is no view of intrinsic worth of individuals under divine command theory, it is solely a sublation of the intrinsic worth of the individual into the teleological purpose of obeying God. Thus, in order to acknowledge the intrinsic value of an individual, divine command theory must be rejected in favor of normative ethical facts which see the individual as someone who is worth good and moral treatment because of their status as an individual, not because good treatment towards them is done through obedience to God.

The divine command theorist would likely respond to this objection by claiming that normative reasons to commit or not commit certain actions come from God. If we are all God's creations and therefore God's children, an act that hurts us is an act that hurts God, which is why an act is immoral. Adams emphasizes in *Finite and Infinite Goods* why this is

the case. God, as an excellent entity with whom religious individuals are in relationship with, deserves compliance, and thus individuals are motivated to oblige by divine commands because they are engaged in a creator-creation relationship with God. In addition, because God's characteristics constitute goodness, the commands that come from God are good as well, and obligation to a command, Adams claims, is motivated by the goodness of said command.

I argue that this line of reasoning is sufficient for strengthening a divine command theorist's conviction as to why an act is moral or immoral but is not strong enough to conclusively determine the morality or immorality of an act within itself. Adams is providing important motivators for why someone who already ascribes to divine command theory would be additionally interested in obeying laws that also happen to be divinely commanded, but he is not satisfactorily providing a source of moral goodness to the command itself. In addition, Adams is still sublating the moral goodness of an action to the impact that the

action has on God rather than the individual itself. Reducing the impact that you make on another person to the consequences it has on their parents or loved ones, which in this context includes God, entirely negates the suffering that is levelled on the victim themselves. Normative reasons for the anti-divine command theorist importantly consider the actual victim of the harm by placing their interests at the centre of the morality of an action towards them.

Adams would not be able to engage with this point because he sees no value to the person as such without seeing that value in the context of God. For Adams, what makes a person valuable and thus worthy of being seen as an end in themselves, rather than as a means to the end of obeying a divine command, is the excellence of God that is displayed within persons as individuals. What makes persons more excellent than other living things is their proximity in resemblance to God: Adams claims that “the multidimensionality of this resemblance makes it a richer and more significant resemblance to God than that of particular abilities... this grounds a qualitative superiority

of the excellence of persons as such” (1999). Again, Adams never considers individuals as an isolated individual— they are always considered in the context of God. As a result, Adams is fundamentally unable to treat an individual as their true own end, as what makes an individual an end to itself is exactly this mediating existence of God which makes the individual valuable and thus worthy of proper and good treatment. Non-divine command theorists are thus the only ones who are genuinely able to consider the person as entirely a person, and not an extension of God or as only being given worth through God.

It is possible to reject the existence of normative ethical facts and maintain the ethical failures of divine command theory. This can be done through the assumption of a pluralist constitution of moral obligations. Moral obligations may not exist due to the intrinsic ethical rightness or wrongness of actions but rather because our social connections forge moral obligations to one another. One example that Erik Wielenberg provides is the promise that he makes to his wife to limit the late nights he

spent drinking (2022). Why does Wielenberg follow through on the promise he makes to his wife to not stay out all night drinking? He is not afraid of violating the commands of God in this case, but rather he is recognising the obligation he has to his wife by virtue of them being married and by virtue of him making that promise. It is possible that the divine command theorist would argue that this case maintains divine command theory, in that the basis of Wielenberg's obligation to his wife is one that comes from God's command to honour the family and not commit adultery. The divine command theorist would attempt to reduce all moral obligations to what Wielenberg calls a "monist account" of the source of morality, which is divine command. However, for Wielenberg, it is likely that he adopts a constitution of moral obligations which do not consider divine command at all. Why does Wielenberg, or anyone, value the relationship he has with his wife so much that he is willing to turn a promise he made to her into a moral obligation? Of course, he likely feels the emotions that are (hopefully) attached to marriage in

that he loves, cherishes, and cares for his wife and does not want to see her hurt by his, or anyone's actions, and that their shared experiences up to that point has cultivated a moral responsibility on his part to do actions that will maintain the relationship. Additionally, he could be attached to the concept of a promise and be unwilling to break promises due to a sense of responsibility he has to the action of making a promise. He could finally be compelled by his wife following through on similar promises that she has made in the past to follow through on the one he is currently making. Wielenberg could base his moral obligation to keep his promise on one of, or likely multiple, of these principles. In this sense he adopts a "pluralist" account of the constitution of moral obligations, claiming that morality is not based on any one principle alone, which for the divine command theorist, is not just any singular principle but the specific principle that actions are morally right or wrong based on whether they are in accordance with or against God's commands.

Ultimately, I advocate for a

synthesized understanding of normative ethical facts which inform our moral obligations and a pluralist constitution of moral obligations that arise from social obligations to one another. In any social bond, we derive pluralist constitutions of moral obligations: we commit to acting in specific ways for various reasons, but all of these reasons contribute to the treatment of our social peers as their own ends rather than as means to their end. In ways that divine command theory, modified or otherwise, makes impossible, we recognize the existence of individuals as those who normatively deserve freedom from unnecessary suffering and basic rights of personal and bodily autonomy. We derive moral obligations not to violate these rights from the intrinsic wrongness of these violations rather than the personal benefits we achieve from respecting these rights, which divine command theory assumes.

Accepting that most individuals act out of some degree of pluralist constitutions of moral obligation—that is, they have social and normative reasons that contribute

to their ethical behaviour towards others— necessarily invokes the rejection of divine command theory, despite Adams' attempts to make the theory more ethically digestible. The concept of divine command theory goes directly against the possibility of pluralist constitutions which inform our moral obligations. All divine command theorists, whether they follow the traditional or modified version, refuse to accept any source of moral obligation which does not directly come from God. In fact, it would be incompatible with divine command theory to suggest that God's commands can be a part of a pluralist constitution toward moral obligation— it necessarily must be the only way in which we derive moral obligations because it can otherwise be contingent upon the existence of other sources of moral obligation.

The response that Adams has to this objection is that all people have understandings of things that they should and should not do which are independent from divine command, but this is not the same as having an ethical framework of right and wrong, which can only come from God. For Adams, what Wielenberg

is doing in this case is not out of moral obligation but rather simply an action he commits because he knows what he would be doing by breaking the promise is wrong. However, this response is weak in defending divine command theory, in that it relegates actions that we commit out of our own moral obligations into simply actions that we like or are against. God's existence or non-existence does not change the nature of obligation that Wielenberg has towards his wife, and it does not impact the various sources that comprise my own obligations for acting. For instance, person A might have a moral obligation to take care of their parents when they are older because they provided person A with a healthy and loving upbringing. It is not simply something that person A would *like* to do, instead, they know that they *must* do it, and this moral obligation would be the same even if there was no God. It is ethically right for Wielenberg to uphold his promise and for person A to care for their parents because they provide the sources for moral obligations.

The Overall Failure of Modified Divine Command Theory

In this paper I have highlighted an attempt by Robert Adams to modify divine command theory in such a way as to provide strong ethical bases upon which it can stand. Adams makes this modification for the purpose of negating the prime ethical dilemma within divine command theory, and in doing so hopes that there is more moral value in associating ethical rightness with God's command. This value comes from the notion that moral obligation comes from a God who would not command cruelty for the sake of cruelty alone because it is incongruent with an accepted characteristic of God.

Where modified divine command theory fails, however, is that it still assumes the non-pluralistic constitution of grounds for moral obligation. It is fundamentally unable to accommodate for the possibility of moral obligations that arise outside of God's command under any version of divine command theory. When one

assumes a monist account of moral obligation, they assume the non-existence of other sources of moral obligation. If normative ethical facts existed, however, and there was intrinsic moral rightness in certain behaviours as opposed to solely divinely granted moral rightness, both traditional and modified divine command theories fail. Adams modifies divine command theory to make it appear more digestible yet fails to consider how individuals can and do ascertain moral obligations from sources entirely unrelated from God.

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Edited by S. Öztürk and J. Pars

Population Status and Conservation Action Plan for Netted Carpet Moth and Touch-Me-Not Balsam at Muncaster Estate, Cumbria

Barbara Francik

The Netted carpet moth, *Eustroma reticulatum*, is a rare Species of Principle Importance in England. It is virtually restricted to the Lake District, Cumbria, with an outlier colony in north Lancashire and multiple past colonies in Mid Wales, although it is now feared extinct there. The Netted carpet moth's larva feed exclusively on Touch-me-not balsam, *Impatiens noli-tangere*, which is itself nationally scarce in Britain. Loss of suitably disturbed habitat and competition with perennials and non-natives has seen declines in the balsam and, consequently, the moth. Habitat preservation in the moth's strongholds is essential to its conservation. Between July and September 2021, full surveys of the Netted carpet moth and Touch-me-not balsam were carried out on the grounds of Muncaster Estate, Cumbria, with the aim of assessing population levels and creating a conservation action plan for both species. A total of 20 balsam patches were located, varying in size from 1 to 394 individuals. Netted carpet larval counts located 151 caterpillars. The results of the 2021 survey represent a 10.2% increase in estimated balsam numbers since the previous full survey in 2014, and a 340% increase in estimated larval numbers. This is significant as 2014 was identified as a declining year for both plant and moth. Further research will be essential to investigate the dynamics of the population and possible fluctuations, but results collected so far have allowed for the formulation of conservation suggestions for the Estate.

Introduction

The Netted carpet moth, *Eustroma reticulatum* (Denis & Schiffermüller, 1775, also known as *E. reticulata*, Lepidoptera: Geometridae) is a rare species in the UK. The moth is thought to be restricted to the Lake District, Cumbria, with some colonies in Lancashire and possibly North Wales, although it is now feared extinct there (Hatcher & Alexander, 1994; Waring & Townsend, 2017). It is listed as a Species of Principle Importance in England, under Section 41 of the Natural Environment and Rural Communities (NERC) Act (England), and is a Wales Priority Species under Section 7 of the Environment Act 2016 (Wales) (Department for Environment, Food and Rural Affairs & Natural England, 2022; Welsh Government, 2016).

The Netted carpet moth's larva feed exclusively on Touch-me-not balsam, *Impatiens noli-tangere* (Balsaminaceae). They eat mostly the seed pods but also the cleistogamous flowers and leaves (Hatcher & Alexander, 1994). The

adults fly between June and mid-August. Larva can be found feeding from late July and are mature by mid-September. They pupate in the soil by October and overwinter there (Henwood & Sterling, 2020). Further information on this moth can be found in (Hatcher & Alexander, 1994).

Touch-me-not balsam is a nationally scarce annual, and the only native species of balsam in the UK (Joint Nature Conservation Committee, 2023; Hatcher P. E., 2003). It favours damp, disturbed, nutrient rich soils in dappled shade and often grows along streams, tracks and sites of forestry operations, grazing and natural disturbance (e.g. windfall). The lack of large grazing animals across much of the balsam's potential range means that sufficiently disturbed sites are often rare. Sites which are not disturbed are liable to colonisation by hardy perennials, which exclude the balsam. In the Lake District, the balsam is mostly found in open deciduous woodland with a high canopy, sparse understorey and low herb layer. The balsam tends to form dense, single-species stands. Seeds

are contained in explosive seed pods and can be expelled to a distance of several metres, meaning the stands can expand quite effectively in suitable conditions. However, stands are vulnerable to competition from encroaching perennials, and in some areas are also threatened by non-native *Impatiens* species. The balsam may have a seedbank, although this probably lasts no longer than 18 months, so the annual setting and successful germination of seeds is essential for stands to persist (Hatcher P. E., 2003).

History at Muncaster

The Netted carpet moth was first found in the Lake District in 1856 (Hatcher & Alexander, 1994) but was first systematically surveyed in 1955 by John Heath (Heath J. , 1959). Muncaster Castle was first included in these surveys in 1998, although Touch-me-not balsam was recorded here in 1979 (SD104963) (Hatcher P. E., 2001). The last full survey was carried out in 2014 (Hatcher P. E., 2015), with the 2015 survey (Hatcher P. E., 2016) being partial. It was determined during the 2015 survey that both moth and foodplant were declining. Other

sites in the Lake District continued to be surveyed but Muncaster Estate was excluded. In 2020, casual observations of 6 larvae were made but no comprehensive surveys were carried out. Table 1 summarises survey results since 1998.

Aims of the 2021 Survey

The aim of this study was to locate all patches of balsam on the Estate and complete a full Netted carpet moth larval survey in order to estimate the size of both the Touch-me-not balsam and the Netted carpet moth populations at Muncaster. This would inform an action plan for the preservation of both moth and plant.

Methods

The survey was done in two parts. Between 26th July 2021 and 8th August 2021, the Estate was searched for Touch-me-not balsam patches. Between 1st September 2021 and 8th of September 2021, a full Netted carpet larval survey was carried out, which included both plant counts and caterpillar counts. Several patches were surveyed earlier but had no larvae.

Year	1998	1999	2000	2002	2005	2006	2007
Plants	600	P	1450	1660	2625	3050	3000
Larva	P	P	19	295	125	170	218
Year	2010	2011	2012	2013	2014	2015*	
Plants	2700	4310	5050	3420	2115	350	
Larva	570	280†	512†	201†	60	31	

Table 1 | Summary of historical surveys at Muncaster since 1998

P = present, no numbers recorded; * Partial survey; † Actual number of caterpillars found, no estimates of total population on the Estate. The above surveys were not all carried out by the same surveyors and, whilst the basic methodology was consistent between them, some aspects, such as estimating plant and caterpillar numbers are somewhat subjective. Therefore, some of the data may not be entirely comparable. Also, due to time constraints, overall caterpillar number estimates were occasionally extrapolated based on small samples of plants checked. Therefore, the data could potentially be used to detect broad trends for Muncaster, but the exact numbers likely have large error margins and should be used with caution.

Balsam Patch Survey

Patches identified by previous surveyors, and those already known to the staff at Muncaster, were located first. New patches were found by visually surveying the woodland and garden areas of the Estate, both on and around the paths. Patch locations were recorded as six-figure grid references.

Patch Nomenclature

Previous surveyors had assigned patches identification numbers. It was decided to also give them names, for ease of use in the localised context of Muncaster.

Both the names and the patches' old identification numbers, as applied in the last full Muncaster survey in 2014 (Hatcher P. E., 2015), are listed in the results.

Plant Counts

Plant counts were produced individually for each patch. Where patches were less than 5m², plants were simply counted. For large patches, an estimate of plant numbers was made by selecting part of the patch and counting accurately the number of individuals within that part, then scaling this number up to cover the whole area of the

patch. This technique is based on the methodology used for previous Muncaster surveys and still in use in other Lake District locations (Hatcher & Alexander, 1994; Hatcher & Hooson, 2021). If a patch was clearly heterogenous in terms of plant density and size, several estimates were taken for different areas of the patch, then summed into an overall patch plant count.

Larval Counts

Caterpillar counts were produced individually for each patch. Plants were searched for caterpillars by looking on the underside of leaves and along stems and branches. Where possible, all plants in a patch were checked, and all their leaves were overturned. In larger patches, only a proportion of plants was searched (at least 20%). Caterpillar numbers were treated as directly proportional to the number of plants, and caterpillar counts were estimated according to the overall plant count for the given patch. This technique is based on the methodology used for previous Muncaster surveys and still in use in other Lake District locations (Hatcher & Alexander, 1994; Hatcher & Hooson, 2021).

Small phoenix (*Ecliptopera silaceata*) has potential to be confused with the Netted carpet moth and was often found on the balsam at Muncaster (Henwood & Sterling, 2020). It can be distinguished by its downward facing mouthparts (Hooson, August 2021). Caterpillars were examined with a hand lens to verify their identity.

One patch (Quarry) had plants which were too wide and too packed to survey entire individual plants. Thus, rather than estimating caterpillar numbers based on the percentage of plants searched, the percentage of foliage searched was used instead.

Most patches were surveyed between 1st and 8th September; a few were visited earlier but in every case when any caterpillars were found, the patches were re-surveyed within the main period.

Identifying Netted Carpet Caterpillars

The Netted carpet has typical “looper” type caterpillars, common amongst Geometrids. Final instars have a green body, a brown-green

head, dark green dorsal line, red dorsal markings, white subdorsal stripes and a clasper edged anteriorly yellowish (Henwood & Sterling, 2020). However, the majority of caterpillars found at Muncaster were early instars lacking mature markings. Thus, there was a significant confusion risk with Small phoenix (*Ecliptopera silaceata*), which is abundant in the Lake District (Hatcher P. E., 2003). Muncaster seems unusual compared to other Netted carpet sites, in that Small phoenix is particularly common and often found in the same balsam patch, or even on the same plant, as Netted carpet (Hatcher & Hooson, 2021). The most reliable distinguishing feature, present in all instar stages, is the forward-facing mouthparts of the Netted carpet, in contrast to the downward-facing mouthparts of the Small phoenix (Hooson, August 2021). Caterpillar mouthpart morphology was thus observed with a hand-lens.

Many sources describe the Netted carpet as being invariably green and the Small phoenix as being either green or brown (Henwood & Sterling, 2020). It should be

noted, however, that some Netted carpet caterpillars, particularly early-stage instars, can range from almost white to pale brown and even orange (Hooson, August 2021). Additionally, they are somewhat translucent, so may appear to have a different colour after feeding, and the anal clasper may appear darker if the caterpillar is producing frass.

Statistical Analysis

Regression analysis was carried out in R 4.2.0 to assess the relationship between the number of balsam plants in a patch and the larval density in a patch, as well as the number of balsam plants in a patch and the number of larvae in a patch.

Results

Balsam Survey

A total of 20 Balsam patches were identified. Of these, 12 had 50 plants or less, and three of these only had one plant. Overall, there were about 2330 individual plants at the Estate. All patches were in the main gardens, except the Hirst Lodge patch. Some patches were very close together, but conditions and

Patch Id	Current Patch Name	Plants			Larvae		
		2014	2021	Change	2014	2021	Change
#1	Old Rose Garden	400	394	-1.5%	15	0	-100%
#2	Garden Patch	140	230	+64%	3	31	+930%
#3	Log Chunks, Tree Cross, Rhododendron	90	207	+130%	4	23	+480%
#3a	Log Pile + Log Pile 2	50	401	+700%	1	49	4800%
#3b, #3c	Conifer Patch	600	535	-11%	20	83	320%
#5	Hirst Fork	40	12	-70%	0	0	n/a
#6	Burn Pile	10	83	+730%	2	22	+1000%
#8	Hirst Lodge	140	250	+79%	14	0	-100%

Table 2 | Changes in balsam and larval numbers between 2014 and 2021.

caterpillar densities clearly varied between them so they were considered as separate. Some of the patches previously identified by other surveyors have now been split into smaller patches. This decision was taken because although the plants were growing in the same general area, they formed distinct and separate clumps and were subject to different conditions. A few patches have been merged. Table 2 summarises the changes in patch sizes and distribution which have occurred between 2014 and 2021.

Larval Survey

Of the 20 identified balsam patches,

10 supported caterpillars. A total of 151 larvae were found across 1481 balsam plants. It is estimated that there were about 265 Netted carpet moth caterpillars at the Estate.

Survey Results

Table 3 shows a summary of the results of the balsam and larval surveys for each patch and their grid references. Note that two patches – Main Gate Art. and River Artificial - were made artificially by Muncaster staff. These artificial patches were made by collecting whole plants from existing patches, keeping them in a greenhouse and then planting them, still in pots, at two sites on the

Patch name	Patch Id	Grid ref	Date	Plants		% checked	Larvae		
				cnt.	est.		cnt.	est.	den.
Main Gate		SD 097 966	24/08	1	1	100%	0	0	
Broken Wall		SD 098 965	24/08	1	1	100%	0	0	
Apple Blossom		SD 098 965	24/08	1	1	100%	0	0	
Old Rose Garden	#1	SD 102 965	01/09	394	394	100%	0	0	
Garden Patch	#2	SD 102 962	08/09	196	230	85%	26	31	1.3
Daisy Tent		SD 102 960	01/09	13	13	100%	0	0	
The Curve		SD 103 962	01/09	36	36	100%	1	1	0.3
Log Pile	#3a	SD 104 962	02/09	162	350	46%	16	35	1.0
"	"	"	"	32	45	71%	5	7	1.6
Log Pile 2	#3a	SD 104 961	07/09	6	6	100%	7	7	11.7
Conifer Patch	#3b, c	SD 104 961	03/09	244	535	46%	38	83	1.6
Burn Pile	#6	SD 103 960	04/09	60	83	72%	16	22	2.7
Quarry		SD 103 960	05/09	25	130	22%	10	45	3.5
Slate		SD 103 960	05/09	8	8	100%	11	11	13.8
Log Chunks	#3	SD 104 962	04/09	82	110	75%	3	4	0.4
Tree Cross	#3	SD 104 962	05/09	48	50	96%	18	19	3.8
Rhododendron	#3	SD 104 962	25/08	47	47	100%	0	0	
Hirst Fork	#5	SD 105 963	25/08	12	12	100%	0	0	
Hirst Lodge	#8	SD 109 967	06/09	86	250	34%	0	0	
Main Gate Art.		SD 097 966	07/09	15	15	100%	0	0	
River Artificial		SD 103 960	10/09	12	12	100%	0	0	
TOTAL				1481	2329		151	265	1.1

Table 3 | Survey summary

Remarks: Patch Id refers to the nomenclature used in 2014 survey (Hatcher P. E., Netted Carpet Moth *Eustroma reticulatum* (Denis & Schiffermüller), Lake District & North Lancashire Survey, September 2014, 2015). Larval density is in larval count per 10 plants based on estimated values. The Log Pile patch counted separately in two adjacent areas.

Abbreviations used: cnt = actual count; est = estimated value; den = density; % checked = percentage of plants checked for larvae.

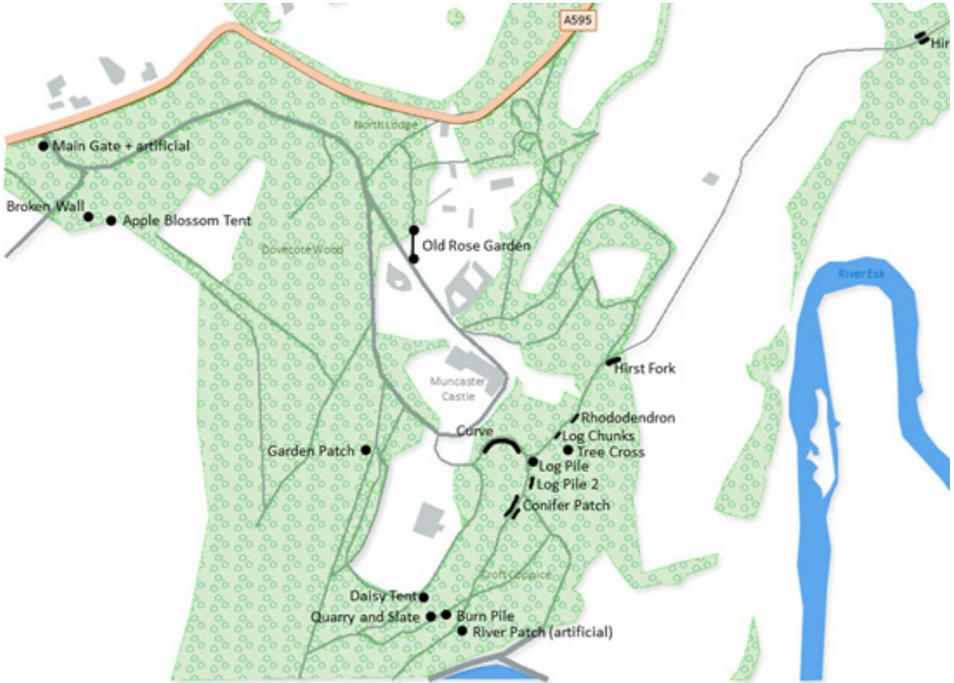


Figure 1 | Map of Muncaster Estate (main garden area) with Touch-me-not balsam, *Impatiens noli-tangere*, patches

Estate. Overall, the condition of the plants in these patches was poor and all plants were below 50cm tall.

Figure 1 shows a map of Muncaster Estate with patch locations marked on.

Relationships Between Balsam Plant Number, Larval Number and Larval Density

Regression analysis was carried out to assess the effect of balsam plant number in a patch on the number and

density of larvae in a patch. Only patches with larvae were included in the analysis and clear outliers with exceptionally large numbers of caterpillars (Log Pile 2 and Slate) were excluded.

As expected, under a linear model there was a significant positive association between the number of plants and the number of larvae in a patch ($p=0.002$). The adjusted R^2

of this model was 0.72. There was no significant relationship between the number of plants and the density of caterpillars in a patch ($p=0.63$). However, the small sample size in both analyses ($n=9$) means these results should be regarded with caution as a larger sample could alter these relationships. Additionally, the data do not meet all assumptions of a linear model (they are skewed and heteroscedastic). With the number of data-points available, no alternative model fit is clear. Thus, it is necessary to gain more data from locations beyond Muncaster and more detailed measurements of confounding variables such as plant size, light intensity and presence of Small phoenix caterpillars.

Discussion

Balsam Surveys

Whilst the balsam has not returned to its peak numbers of about 5000 plants, as recorded in the 2012 survey, it has reached numbers comparable with the 2014 survey (increase of 10.2%) and, earlier, the 2005 survey (decrease of 11.2%). Most patches which existed in 2014,

during the last full survey, and survived into 2021 have seen large increases in plant numbers.

Larval Surveys

Viable populations of both Touch-me-not balsam and Netted carpet moth have survived since the last (partial) survey in 2015, when they were determined to be declining (Hatcher P. E., 2016). The reason for the drop in larval counts is not known, but was probably caused by a number of factors including damage to existing balsam patches and possibly the overwhelming of food resources by unusually high numbers of caterpillars shortly before the decline (Abbott & Dwyer, 2007; Kang & Armbruster, 2008). It has also been suggested that too little rainfall can decrease balsam abundance and Netted carpet moth population size (Heath J., 1959). The 2011-2013 surveys were done by local staff so plant count estimates may not be entirely comparable to previous surveys and it is unknown whether particular care was taken to distinguish between Netted carpet and Small phoenix caterpillars, so larval counts may be inflated.

Larval numbers have increased by 340% and density by 300% since 2014. In all patches which had larvae in 2014, there have been very large increases in 2021, apart from in three patches where the larva seem to have gone extinct. The period 2010-2013 seems to have been very good for both plant and moth, and these numbers have not been reached in 2021. However, estimated caterpillar numbers are higher than all pre-2010 estimates, apart from 2002.

A positive association was found between the number of plants in a patch and the number of caterpillars. No relationship was found between the number of plants in a patch and the density of caterpillars. Two very small patches had exceptionally large caterpillar densities of above 10, which was probably because anything which hatched on these plants was very limited in how far it could range. In patches where there were no larvae, this is likely down to there being too few plants, the plants being too small, or the patch being distant from already established moth colonies. The two artificial patches were likely planted too late

in the season for the moth to have a chance to lay eggs on them.

Action Plan for Muncaster

Given the overall number of balsam plants at the Estate, the population density of Netted carpet is high. Expanding its habitat will be key not only to growing the moth's population, but also ensuring that its population does not overwhelm the resources currently available to it.

The largest patch of balsam at Muncaster, the Conifer Patch, totals to about 535 plants. To be considered stable, a patch should have at least 1,000 plants (Hatcher & Hooson, 2021). Even seemingly well-established patches, which have persisted for several years, can disappear quickly if not appropriately maintained, largely due to the balsam not having an effective seed-bank (Hatcher P. E., 2003). Thus, action is needed to protect and expand existing balsam patches.

Three main aims have been identified as key to Muncaster's Netted Carpet Moth Action Plan:

1. *Conserve and expand existing balsam patches*

The balsam requires damp, nutrient-rich soil, which is regularly disturbed and subject to dappled shade. Areas for balsam growth should be prepared by removing other vegetation, particularly nettles and brambles, after the balsam has died back (Hatcher & Hooson, 2021). The ground should be disturbed, ideally by turning it over or digging (Hatcher & Hooson, 2021). Touch-me-not balsam is an effective self-seeder and has the ability to eject its seeds over several meters via explosive seed pods (Hatcher P. E., 2003). Thus, scattering seeds around existing patches is largely unnecessary unless the patches show no progress.

2. *Create new balsam patches*

Muncaster already has several places which have appropriate conditions for balsam, although some undergrowth will need to be removed. The paths heading from the Log Pile towards Hirst Park, and from the Log Pile towards the Burn Pit and Quarry, are already lined with balsam, and are good places to start establishing new patches. Note that whilst the balsam requires a

degree of shade, it often grows better in comparatively sunnier conditions than those favoured by the Netted carpet.

In the long term, patches will need to be established in more distant locations around the Estate, such as on-route to Hirst Lodge. This will allow the moth to spread over a much wider area via an “island hopping” approach which increases patch connectivity.

3. *Continue regularly surveying the Netted carpet moth and Touch-me-not balsam*

Continued surveying of the balsam and moth is essential to monitor the health of their populations. In future surveys, additional information could be gathered, including plant size, light intensity and number of Small phoenix caterpillars present, to better understand their effects on Netted carpet populations.

Conclusion

The Muncaster populations of Touch-me-not balsam, *Impatiens noli-tangere*, and Netted carpet moth, *Eustroma reticulatum*, have grown since the last full survey in

2014. Contrary to expectations, neither have gone extinct and there is potential to build stable populations at Muncaster. This will require work to maintain existing balsam patches, create new balsam patches and continue to survey both moth and plant. To better understand the factors impacting Netted carpet populations, additional information about their home patches should be collected, including plant size, light levels and the number of Small phoenix, *Ecliptopera silaceata*, present.

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Edited by N. Juraschko
& M. Valsamis

Lessons from the Lorax: Capitalism, Climate Change and Corporate Law

Sophie Treacy

It has been fifty years since Dr. Seuss published his internationally beloved book, *The Lorax*. Despite being aimed at an audience of children, this pointed and condemning eco-fable lobs a number of scathing environmentalist criticisms at the corporate America of the 1960s. As environmental degradation continues to dominate the international social and political agenda, Seuss' normative critique of the social and legal frameworks that have fostered capitalism and excessive consumerism at the expense of the environment proves more salient than ever. Accordingly, this article aims to revisit Seuss' work from a critical enviro-legal perspective and use it as an analytical gateway to explore some of the most pertinent issues pertaining to the intersection of capitalism, environmentalism, and the legal system. The core eco-criticisms of the story will be teased out and their didactic value measured in accordance with how well they reflect the contemporary legal and political structures that are impacting the environment. It will be demonstrated that the story sheds a revealing light on some of the most pressing environmentalist concerns that we are faced with today, and that fifty years later, there is much we can learn from *The Lorax*.

*“Unless someone like you cares a whole awful lot;
Nothing is going to get better, it’s not.”*
- Dr. Seuss, *The Lorax* 1971

As evidence that we are hurtling toward an unprecedented environmental catastrophe continues to emerge, the threats of climate change are never far from policy debates in the global political sphere.

As human-induced climate change is already impacting every area on the planet, manifesting in weather extremes, droughts, cyclones, heatwaves and glacial erosion, it is difficult to imagine a more urgent issue facing humanity in the post Covid-19 world (Intergovernmental Panel on Climate Change, 2021). This looming threat of environmental degradation has forced a widespread and profound re-evaluation of many long-standing societal institutions, such as the operation of shareholder capitalism. Indeed, the recent explosion of concepts such as *Environmental Social Governance* (ESG) in the global marketplace is indicative of a fundamental paradigm shift relating to corporate purpose, as the creation of environmentally harmful externalities through corporate activity is becoming increasingly unacceptable within society. Concerns over the extent to which corporate activity is contributing to environmental degradation, however, is by no means a new phenomenon. Fifty years ago, Dr Seuss published his much-loved book *The Lorax*, a story that lobs a number of pronounced criticisms

at the operation of shareholder capitalism and its ramifications for the natural environment. The condemnatory overtones of this story seem to resonate deeply with the present day, as they articulate a strong dissatisfaction with the profit-maximisation norm of shareholder capitalism. This article will revisit the tale of *The Lorax* in so far as it provides an enviro-legal critique of the capitalist, shareholder-oriented system of corporate governance that is contributing to environmental degradation. Both the strengths and weaknesses of Seuss' normative critique will be teased out, and it will be submitted that both elements of the story are equally informative in shedding light on the current environmental crisis with which we are now faced.

The story of *The Lorax* begins with a young unnamed child crossing a deserted and barren wasteland to visit "the Once-ler", an elderly recluse who promises to tell the child how the natural environment came to be destroyed. Through a series of flashbacks, the Once-ler explains how he cut down all the Truffula trees in order to manufacture and sell

faddish garments called “Thneeds”. The Once-ler ignored all warnings from the Lorax, a small creature who is the self-proclaimed “guardian of the forest”, and proceeded to over-exploit and pollute the natural environment until there were no more Truffula trees left. The story finishes on a redemptive note, as the Once-ler entrusts the child with the last remaining Truffula tree seed, asking the child to treat it with care and to restore the natural environment once more.

Lesson One: The Problem of the Profit-Maximisation Norm and Environmental Externalities

Since the 1930s, the question whether corporations should serve either their shareholders in isolation or a wider pool of stakeholders, such as employees, customers and the environment, has fuelled one of the most enduring debates in corporate governance theory. Whilst the idea that company directors retain a level of “social responsibility” to their local communities began to gain some currency in the 1950s and 1960s,

thanks to the work of commentators such as Howard Bowen (1953) and Keith Davis (1960), this perspective began to decline rapidly in the 1970s. In 1970, Milton Friedman published his infamous article in the New York Times, entitled ‘The Social Responsibility of Business is to Increase its Profits’, condemning corporate managers straying from straightforward profit-maximisation, lest we descend into a state of “pure and unadulterated socialism”. The idea that the corporate purpose should be ring-fenced around the maximisation of company profit, and in doing so community interests are optimally served, quickly captured the imagination of corporate directors across Europe and the United States, leading to a Friedman utopia of shareholder capitalism that had been relatively unchallenged until the recent emergence of the ESG-movement (Lund and Pollman, 2021). The problem with such a model of shareholder capitalism, however, is that it fetters the decisions of company directors to those actions that will maximise shareholder return, even if this requires cost externalisation at the expense of the

environment. One year after Milton Friedman published his infamous New York Times article, heralding the dawn of a new shareholderist governance paradigm, Dr. Seuss published *The Lorax*. One does not need to look too far into the messages contained within the story before identifying the damning criticisms that Seuss lobbs against shareholder-oriented governance. As will be illustrated later, support for the kind of shareholderist capitalism that overtook the corporate sphere in the 1970s is eroding with increasing vigour in the wake of the climate crisis. Thus, perhaps the story of *The Lorax* and the critiques contained therein may shed a light on why support for traditional shareholderism is declining so rapidly in response to environmental degradation.

The story's antagonist and narrator, the Once-ler, is cast as a greedy, profit-driven capitalist who personifies two heavily criticised tenets of shareholder capitalism; i) wealth accumulation for its own sake (Magdoff and Foster, 2011) and ii) the failure to adequately consider the negative externalities caused by

corporate activity (Juniper, 2014). In terms of the first tenet, the Once-ler establishes a Thneed factory which focuses on profit-maximisation to the extreme, and attempts to defend his activities to the Lorax by arguing that "*I meant no harm./ I truly did not./ I had to grow bigger./ So bigger I got./ I went on biggering... selling more Thneeds./ And I biggered my money, which everyone needs*". This phrase echoes how capitalists are portrayed in the writings of Karl Marx (1867) and John Maynard Keynes (1936). As Marx wrote in *Capital*, p. 203, capitalism has "no rest, and continually whispers in [the capitalist's] ear: Go on! Go on!" Maynard Keynes has also written that capitalism recognizes no limits to its own self-expansion ... no amount of wealth is either "enough" or "too much". Indeed, no amount of wealth is "enough" or "too much" for the Once-ler, as he exclaims that "*business is business./ And business must grow*", without providing any further rationale for this all-encompassing growth mandate. The Once-ler's almost comical obsession with wealth accumulation is a clear criticism of the profit-maximisation norm of

shareholder capitalism, portraying it as destructive and artificial, as the Once-ler adopts a myopic pursuit of short-term financial gain without any deeper rationale beyond profit-maximisation for its own sake, which is to his own ultimate detriment. In terms of the second heavily criticised tenet of shareholder capitalism, the Once-ler's Thneed factory works to cut down all Truffula trees in the vicinity without paying any regard to the devastating consequences for the natural environment and its inhabitants, thereby showing a complete failure to take into account the negative environmental externalities of corporate activity. The Once-ler's complete lack of regard for the wider social and environmental consequences borne out of his activities exposes capitalism as an economy of unpaid costs that must be shouldered by the wider community, the environment, and indeed the Once-ler himself, as there are ultimately no more Truffula trees at his disposal (Kapp, 1971). This is a point that Seuss makes quite explicitly, as the anthropomorphised Seussian fauna are seen in various states of pain and suffering, with the Lorax informing the Once-ler that

“they may have to fly for a month of a year./ To escape from the smog you’ve smogged-up around here.” The environmental cost brought to bear upon these animals is contrasted against the Thneed costing just *“three ninety-eight”*, challenging the reader to question the capitalist paradigm of shareholder profit-maximisation, which ignores environmental externalities such as water contamination, air pollution and global warming. Seuss employs a striking *Paradise Lost*-inspired motif, as the natural environment transitions from an Edenic paradise to a hellish wasteland to the detriment of all, including the Once-ler, as there are eventually no more Truffula trees left for him to exploit. The Once-ler's failure to incorporate concerns for broader stakeholders such as the environment into his corporate enterprise leads to the ultimate demise of his own business. This is clearly an attack on corporate myopia and the way in which shareholder capitalism encourages corporate directors to adopt a blinkered view on short-term profit-maximisation, notwithstanding the hefty long-term tolls on the natural environment. Through

vesting the Once-ler with the central characteristics of shareholder capitalism, in that he accumulates unlimited wealth at the expense of the natural environment, *The Lorax* raises some piercing critiques of shareholder capitalism from the perspective of environmental harm.

At a time when concepts such as Environmental Social Governance (ESG) and corporate social responsibility (CSR) are quickly becoming mainstays in corporate parlance, the critiques that Seuss makes of traditional shareholder capitalism vividly illustrate why this is the case, as we face unprecedented environmental degradation due, in large part, to irresponsible corporate activity. The tale of the Once-ler's demise, whereby his blinkered pursuit of short-term profit at the expense of other stakeholders ultimately destroyed his long-term profit, captures an emerging popular sentiment that "good business is better business" (Jones, 2011), as it is actually in the interests of companies to take environmental externalities into account. Many proponents of ESG-related measures in governance strategy have attempted to make out

a "business case" for corporate social responsibility, arguing that there is a positive correlative relationship between the implementation of ESG and long-term shareholder value (Friede *et al*, 2015). This idea has been gradually gaining momentum in the corporate sphere since the 2005 United Nations Conference 'Who Cares Wins' (Scott, 2022), which first sparked the global discussion over how companies can flourish together with their communities in the best interests of all shareholders and stakeholders (Jones, 2011). Since then, the concept of ESG has infiltrated the highest echelons of corporate governance, with Larry Fink, CEO of the world's largest asset manager BlackRock, issuing a letter earlier this year calling on company executives to consider the interests of a "full range of stakeholders in order to deliver long-term value for its shareholders" (Fink, 2022). Equally, The Organization for Economic Co-operation Development (OECD) has recently published guidelines for corporate governance that recommend boards to "take into account the interests of stakeholders" (OECD, 2015, p. 46). This high-level endorsement of a move toward

“enlightened” shareholder value is further supplemented by a number of empirical studies that present ESG-measures as going hand in hand with shareholder profit-maximisation, such as a recent meta-study conducted by Deutsche Bank (Fulton, 2012), and a case study based on the annual reports of mega-corporation Royal Dutch Shell Plc (Ekatah *et al*, 2011). Corporate law scholarship has presented conclusions to a similar effect, with many commentators advocating for an “enlightened self-interest perspective” (Gautier and Pache, 2015, p. 349) on corporate governance, whereby company directors take environmental considerations into account when discharging their duties to shareholders, which is critical if companies wish to attract new investment. Thus, it is clear that the traditional governance paradigm of shareholder profit-maximisation is coming under sustained attack from multiple angles in both the corporate and academic spheres.

As the effective implementation of ESG continues to dominate discussions on corporate purpose,

the story of *The Lorax* illustrates the exact kind of situation that the ESG movement is trying to prevent. The point that Seuss advances, that the creation of excessive environmental externalities under a traditional model of shareholder capitalism will eventually lead to the demise of the planet, has never been more politically salient. Thus, the story of *The Lorax* can provide us with an insightful illustration of the problems that come with the traditional profit-maximisation norm of corporate governance, which explains why the current ESG movement is attempting to add socially and environmentally conscious nuance to the traditional paradigm of shareholder primacy.

Lesson Two: The Solution to the Profit-Maximisation Norm and Environmental Externalities

Whilst the story of *The Lorax* undoubtedly succeeds in highlighting the environmental risk inherent in the profit-maximisation norm of corporate governance, Seuss’ narrative leaves out two key features of shareholder capitalism; (i) the

existence of market competition and (ii) the separation of ownership and control in company administration. By presenting a truncated version of how shareholder capitalism actually functions, the real-world critique that Seuss advances falls short in a sense, as the fictitious world within which he situates his critique is not an accurate representation of how capitalism functions in reality. However, this does not mean we have nothing to learn from this shortcoming; the above discrepancies inadvertently reveal how great a challenge it will be to dethrone shareholder capitalism as the prevailing norm of corporate governance.

The first discrepancy between shareholder capitalism as it functions in the real world and how it is presented by *The Lorax* is that in the case of the latter, there seems to be a complete absence of market competition. This allows Seuss to criticise shareholder capitalism whilst overlooking a critical reason why companies might be forced to engage in profit-maximising and environmentally destructive

activities. Throughout the story of *The Lorax*, the Once-ler's Thneed factory seems to exist in a vacuum, free from all market competition (Hylton, 2003). This allows Seuss to attribute the blame for the Once-ler's irresponsible activities to his insatiable greed. In reality, however, businesses come under immense pressure to project costs onto the environment, not because of archetypal "greedy shareholders", but because if they don't, their competitors will (World Economic Forum, 2016). It is the constant threat of market competition under capitalism that creates an environmental "race to the bottom" (Holzinger and Sommerer, 2011, p. 315), as corporate managers are forced to seek out the most cost-effective means of running their businesses in order to resist the competitive pressure of their peers. In stark contrast with the monopolistic world of *The Lorax*, antitrust law fosters a competitive marketplace that pressurises even the least "greedy" of corporate managers to engage in cost-cutting practices at the expense of the environment. As the American courts often

emphasized around the time of *The Lorax*' original publication,¹ market competition has “deep roots” (Wells, 2002) in capitalist tradition from the perspective of preserving consumer sovereignty (Galbraith, 1971). This is what fundamentally drives corporations to engage in cost-cutting and profit-maximisation practices at the expense of the environment, as opposed to individual corporate greed as *The Lorax* would suggest. This discrepancy between how capitalism operates in reality versus how it is presented by Seuss reveals that it is overly simplistic and counter-productive to place the blame for environmentally destructive corporate activity at the door of shareholder greed. Rather, this issue requires a much more nuanced solution than simply abandoning shareholder capitalism, as Seuss strongly implies that we should. As Seuss' critique of shareholder capitalism overlooks the obstacle of market competition in the disestablishment of shareholder capitalism, the true challenge that this necessary paradigm shift entails is revealed.

The second discrepancy between shareholder capitalism as it operates in reality versus how it operates in the universe of *The Lorax*, is that, in the case of the former, there is a separation of ownership and control in company administration. In other words, whilst shareholders are the official “owners” of corporations, as they are the suppliers of capital, the administration of the company is delegated to a board of directors (Berle and Means, 1932). Inevitably, this gives rise to what corporate law scholarship has called the “agency problem” (Monks and Minow, 2010), which denotes the risk that company directors will act opportunistically or selfishly to the ultimate financial detriment of the shareholders on behalf of whom they act (Bebchuk, 2005). In order to overcome this problem of agency, the principle of profit-maximisation was introduced into corporate governance in the form of a fiduciary duty that holds company directors accountable to their shareholders (Kraakman *et al*, 2017). The theory is that if the decisions of company directors are underwritten by a duty to maximise shareholder wealth,

1. See for instance *Contitental TV Inc. v GTE Sylvania Inc.* (1977) 433 US 36.

then the risk that arises when the ownership and control of company assets are separated is overcome. Accordingly, the dominance of the profit-maximisation norm under shareholder capitalism cannot be properly understood without first appreciating the problem of agency to which it responds. In the story of *The Lorax*, by contrast, Seuss depicts the Once-ler as both the sole shareholder and director of the Thneed factory. It is therefore the Once-ler's own selfish interest in profit-maximisation *qua* shareholder that drives his environmentally irresponsible behaviour *qua* director. Because there is no separation of ownership and control in Seuss' depiction of shareholder capitalism, the Once-ler's pursuit of wealth is solely attributed to his individual greed, as he is under no fiduciary duty to maximise the wealth of any constituency other than himself. The trouble with this depiction of shareholder capitalism is that to blame the principle of wealth maximisation solely on individual greed is overly simplistic. In reality, the traditional model of shareholder profit-maximisation rests not only on the idea that shareholders wish

to be as rich as possible, but also that there must be some mechanism within corporate governance that restrains company directors from acting opportunistically under the agency paradigm. Although the profit-maximisation norm has many negative consequences from the perspective of environmental degradation, which is well documented throughout *The Lorax*, the positive consequences of such a model of governance are completely discounted. For example, because the profit-maximisation norm of shareholder primacy ensures that corporate directors will not act to the detriment of their shareholders, this encourages shareholders to make capital investments in business, to the benefit of society at large (Stout, 2002). Thus, if we are to dispense with the profit-maximisation norm of corporate governance, as Seuss heavily implies we should, this raises the question of how the agency problem should be overcome. As Seuss creates a world in which there is no separation of ownership and control, he is able to lob scathing criticisms against wealth-maximising company administration whilst overlooking all of its benefits.

By contrasting how shareholder capitalism operates in the world of *The Lorax* versus reality, we are able to see that a move away from the profit-maximisation norm of corporate governance would be more challenging than it may at first appear, as the separation of ownership and control necessitates a governance system that provides an effective solution to the agency problem. Whilst the agency problem generated by the separation of ownership of control is by no means an insurmountable obstacle to the necessary shift away from shareholder capitalism, this lacuna in Seuss' narrative represents an inherent weakness to the real-world critique that *The Lorax* offers.

Whilst *The Lorax* is highly effective in terms of illustrating the problems of shareholder capitalism, it somewhat distorts how this system of corporate governance actually functions, which prevents it from providing any real solutions to these problems. It is clear that the behaviour of the Once-ler in pursuing wealth-accumulation without any regard to environmental externalities is ultimately to his

own detriment. This amounts to an important lesson, which is only recently beginning to dawn across the corporate sphere with the advent of ESG. However, if we consider how shareholder capitalism actually functions, we see that what is specifically being critiqued by Seuss does not lie at the actual heart of the problem. *The Lorax* would have us believe that the profit-maximization norm is solely down to shareholder "greed" and therefore should be dispensed with, in the interests of more pressing concerns such as environmental degradation. In reality, however, the normative underpinnings of shareholder value-maximisation are far less easy to discount, particularly given the necessity of market competition and the agency problem to which the profit-maximisation norm responds. Whilst these discrepancies between how shareholder capitalism functions in reality versus in *The Lorax* reveal certain shortcomings to Seuss' critique, they also yield the important lesson that if we are to move away from shareholder capitalism, as the climate crisis demands, then this move will require a far more nuanced and complex

solution than the story of *The Lorax* would suggest.

Conclusion

As concerns over climate change continue to mount, and debates about corporate social responsibility are playing out very publicly all over the world, it seems that the traditional profit-maximisation norm of corporate governance is teetering on the brink of an imminent overhaul. The extent to which corporations incorporate wider stakeholder interests into their corporate purpose mandate is particularly important if societal problems like the climate crisis are to be tackled through the corporate governance framework, as opposed to state regulation. Ironically, at the same time that this model of shareholder capitalism first took root in the corporate sphere just over fifty years ago, Dr. Seuss published *The Lorax*, a story that seems to embody the kind of concerns that are currently driving the ESG-movement. Through raising important criticisms in relation to wealth accumulation under shareholder capitalism and

environmental cost externalisation, the story delivers a compelling normative critique that calls us to question both the society in which we live and the one we hope to build for the future. This shows us that fifty years later, there is still much we can learn from *The Lorax*.

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Edited by B.D. Laan

Un-ing

Rohit Ghosh

An undertaking akin to
Self-immolation, deluded into
Pretentious reincarnation. Layers

Of unpeeled skin, of unreeled film, layers
Of unravelling, of untethering –
I am lain no less stark.

Inverse cycles are still cycles.
I choke to the last spoke:
Mistake, recall, undo, redo,

Mistake, recall, undo, redo,
Mistake, recall (shit!), undo, redo
Mistake (oh no oh) recall undo no no redo

Mistake, undo (no wait) mistake, recall
redo mistake, undo recall, undo mistake
Undo undo undo undo un un un –

Un-ing and running:
I reverse, inverse, unverse into primality.
Entropies of re/de/unformation unfold
Into screams. And the scabs:
I can never quite unpick the scabs,
Lest tell whose they are, anymore.

An effigy of cascading echoes remains:
Inscriptions of old Self
Skin-scraped on a blank slate

Scrubbed too hard.
My un-doing is my undoing:
What is done cannot be undone.

The cycle renews:
The next un-ning is upon Us.
All of Me, all of Self,

All of You (whatever You are):
This time, this slate of moment,
I choose myself.

So let me begin –

Freshers

Ying Tong

On Matriculation Day, I blundered into the ranks of freshers
in white shirts, with two black ribbons floating behind *sub fuscis*
Marching, they belonged to an alliance of innocence,
signalling tiredness of various levels while exuberant inside
I fell behind along Queen's Lane, where curly tan walls
guided them ahead, yet ran into them again under the Bridge of Sighs,
where I took a detour. I lost my ceremony stolen by the virus,
thus, belonging to another coalition of nothingness, or imagination

Dual sentiments arose to define the position of my eyes:
from an elder, a slight paternalism but also, a virtue
not to spoil any conundrums of their adolescence. Or perhaps
from a superfluous contemporary who had been locked in to see
the hazard and scarcity of time, but with less melancholy,
for the vaccine had induced a novel pain and calmness
A distinctive combination, simulating the practice of such clichés:
bitterness and wisdom, loss and gain, vibrance and demise

A cliché of ethical dichotomy, an acceptance of compromise
Those who were excellent in this practice are becoming immune to
the first coming. "I am old", said someone, a girl who clipped a cigarette
between two fingers, standing at the gate of her college, my college
Without any warning, she had run into this round of Matriculation
by accident, as an alumnus, once a fresher. Still young, she shouted
aloud to her friends, "I'm getting old!" A discovery of new loneliness
mixed with panic, and the outrage of being carried away from her

prime, a stage she was not yet able to flexibly define. Drunken enough, her voice sparked, heading towards a monolith of reality, covered by the smoke against the dark sky. Calmly, I walked past those empty bottles left at midnight, and listened to repeated complaints vented by a gardener for freshers' vomitus. At the end of the day, I gave applause to my students, the stars, and measured indignation then continued to put pins in a pile of memoirs from wartime soldiers. Indeed, it took long to admit my role as a passer-by, from kindergarten,

Young Pioneer, to a doctoral candidate, to a Buddhist understanding of vanishing. Who has been forced to embrace the monolith with nihilism and a pretext of benevolence? Perhaps, this is a subject as old as the Trojan, as new as a red poppy worn in the modern age, east and west. Isn't it? If identified, emerging parallels are silks of cocoons binding our feet from moving on. Should they be forgotten, they fade into a sophisticated face, hanging in the backdrop of every Matriculation, sometimes as the blurry face of the Sphinx, or an angel with the trumpet

The Editorial board



Benjamin J.B. Bréant - *Editor-in-Chief*

I am reading for a DPhil in Physiology, Anatomy and Genetics at Pembroke College, Oxford. I am interested in sleep and dissociated brain states. Pembroke College and the Middle Common Room have always fostered a thriving academic community. I am grateful for the opportunity (and unconditional support!) to create a platform showcasing the work of my peers.

Seda Öztürk - *Humanities Editor*

I am a second-year DPhil student working on the syntax and semantics of Causativization at the Faculty of Asian and Middle Eastern Studies. As a Humanities editor of PAJ, engaging with Pembroke's student community, discussing their papers, and connecting with reviewers was a fascinating experience, that I thoroughly enjoyed. I am truly honoured to be a part of the inaugural volume of Pembroke's very own academic journal.



Juliana (Jules) Pars - *Humanities Editor*

I am currently doing a DPhil in Asian and Middle Eastern Studies. My research focuses on how traditional Armenian art has been engaged with by Modern artists, examining the culturally emblematic evolution of such forms and their role in the formation, navigation and expression of Armenian identity. It's been an honour to work with our contributors and the wider editorial team on this journal's first edition.



Boaz D. Laan - *Social Science Editor*

I am a Philosophy DPhil student in my second year. It is very exciting to add to four hundred (!) years of tradition in pursuing curiosity at Pembroke; to showcase the academic achievements of Pembroke's students; and to contribute to the growth of Pembroke; by being part of the launch of a brand-new journal, for students, by students.





Nikolai Juraschko - Science Editor

In my Biochemistry DPhil, I try combining molecular simulations with machine learning to identify protein structures in the crowded cell environment seen with cryo-electron tomography. Coming from Mathematics and now diving into the biological world of proteins, interdisciplinarity is important to me, and I am excited to be involved in the debut of the Journal as we look towards the college's 400-year anniversary.

Markos Valsamis - Science Editor

I am completing a DPhil in Musculoskeletal Sciences, with the overall aim of improving outcomes for patients having shoulder replacements. My previous research has focused on learning curve modelling and investigating patterns of learning in elective and emergency surgery. I also enjoy representing Oxford University in BUCS table tennis competitions and am an active member of the Underwater Exploration Group.



Michelle B. Chong - Creative Writing

I am an English DPhil student whose research examines portrayals of bodily movement and gesture in Victorian literature. It has been a privilege to work with the literary voices of Pembroke – illuminated by the legacies of Samuel Johnson and J. R. R. Tolkien. The launch of this journal provides a much-welcomed platform to capture the next generation of present poetic voices at Pembroke.



*Thank you all very much for trusting us with the creation of the
Pembroke Academic Journal.*



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