

Revisiting “Unless”: When Should We Expect *The Lorax*?

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Submitted September 9, 2022; Accepted December 3, 2022

ABSTRACT

During the 1960s a flurry of provocative publications sparked broader awareness and concern for the environment. In 1971, Dr. Seuss published *The Lorax* to communicate environmental concerns to young children. The book engages complex themes with rhythmic language and colorful artwork. For decades, the book has served as an early introduction to the tradeoffs between consumption and the environment inherent in market-based economics. Over time, the environmental movement has evolved. For many, technological innovation insures a sustainable future; while for others, technological innovation exacerbates challenges facing society and the environment. Although written for children one-half century ago, *The Lorax* represents a compelling expression of the complexity of environmental concerns and controversies.

Keywords: Dr. Seuss, environmental education, sustainability

Theodor Geisel (1971) writing under the *nom de plume*, Dr. Seuss, wrote *The Lorax* as a cautionary tale to inspire young readers to embrace the nascent environmental protection movement of the 1960s and early 1970s (Wolfe, 2008; Witter, 2020). While the moral of the story is not subtle, Seuss’s prescription mirrors the ambiguity of the mysterious “Unless” left behind by the titular character. The moral is undeniable, but the underlying problem remains omitted from the discourse. This essay reviews an established dichotomy to explore Geisel’s prescription in the context of the environment movement fifty years after publication of *The Lorax*.

A primary purpose of this essay is to collect and share insights regarding the depth of the presentation by Dr. Seuss, so teachers may employ the text with greater confidence and effectiveness to help children realize their agency in the well-being of the environment. Geisel quite literally places the future of the environment in the hand of young child. The normative language of the title of this essay is intended to evoke the familiar ethics mantra, ought implies can, to suggest that the promise of the story is realized through the understanding and action of children.¹

The Lorax, as a franchise, takes multiple forms including a television adaptation and an animated feature film presented in theaters. The 1972 television program and the 2012 film modify the story to accommodate the respective medium. This essay refers primarily to the Seuss illustrated text with a singular exception that is clearly noted. Given the various forms of *The Lorax*, it is prudent to provide a summary of the original text and a cursory review of the historical context in which Geisel conceived and executed his vision. Commentary on the text as an educational resource and as tool to promote concern for the environment contextualize the discussion pertaining to the competing perspectives informing the environmental movement of the past half century.

¹ The statement is often attributed to Kant, but there is considerable debate who originated the formula.

Characters and Plot

The Lorax is Geisel's favorite book (MacDonald, 1988; Witter 2020) and was reportedly difficult to craft until Geisel vacationed in Africa where Patas monkeys are believed to have influenced the physical attributes of the titular character, and the Thorned Acacia inspired the image of the Truffula trees (Dominy, Winters, Pease, & Higham 2018). The narrator of the story is a young boy who makes his way through a lifeless setting to the dilapidated home of the Once-ler, who, for a fee, tells the boy how the dreary condition of the landscape came to be. Prior to the arrival of the Once-ler, the landscape was alive with color and sound from Swomee-Swans, Humming-Fish, and Brown Bar-ba-loots, yet it was the delicate tuft of the Truffula Trees that inspired the opportunistic Once-ler to end his search and to erect a shop in which he intended to produce the ironically branded Thneed.

Having chopped down a tree to access the tuft needed to produce the first Thneed, the Once-ler is visited by an unfamiliar creature, who introduces himself as *The Lorax*, an advocate for the trees. While confronting the Once-ler, *The Lorax* is distracted by the appearance of the Thneed, for which there is no apparent use nor aesthetic appeal. The conflict escalates when a faceless consumer purchases the Thneed, thereby validating the Once-ler's suspicion of the commercial viability of the product. Illustrations reveal expansion of the physical plant, and, in time, deployment of the Super-Axe-Hacker to chop four trees at a time to meet consumer demand.

As the Super-Axe-Hacker accelerates deforestation, the *The Lorax* revisits the Once-ler to inform him that the Brown Bar-ba-loots must seek food elsewhere because there is an insufficient supply of fruit from the remaining Truffula trees. Undeterred, the Once-ler continues to expand production to exploit the lucrative market opportunity. The *The Lorax* visits a second time to inform the Once-ler that the Swomee-Swans can no longer sing due to the smog and will seek clean air elsewhere. As the Swomee-Swans fly away, *The Lorax* escorts the Once-ler to witness the Humming-Fish abandoning their home as byproducts, Gluppity-Glupp and Schloppity-Schopp, from the factory pollute the water habitat. Despite evidence of the undesirable environmental consequences of producing Thneeds, the Once-ler continues production to satisfy the market demand until the last of the Truffula trees falls. With the once idyllic paradise now devoid of flora and fauna, *The Lorax* exits through an opening in the smog. Where he stood, he leaves behind a message "UNLESS" that the Once-ler does not initially understand. As the Once-ler finishes telling his story, he determines that the message means that the environment will not recover "UNLESS" someone cares, more specifically, the environment will not recover "UNLESS" someone makes the effort to nurture and to protect its revival. Seuss's story concludes when the Once-ler delivers the last seed of a Truffula tree to the narrator and encourages the boy to tend to the tree so one day *The Lorax* will return.

Context for *The Lorax*

Informed by Thoreau's *Walden* (1854), *Progress and Poverty* (George, 1879), teachings of John Muir, the conservation effort of Theodore Roosevelt, and Leopold's *Sands County Almanac* (1949), environmental consciousness accelerated in the United States during the 1960s largely due to the publication of *Silent Spring* by Rachel Carson in 1962 and *Operating Manual for Spaceship Earth* by Buckminster Fuller (1968). Catapulted into the public consciousness by images of a burning Cuyahoga River in 1969, government established the Environmental Protection Agency and augmented the Clean Air Act in 1970. Publication of *The Population Bomb* (Ehrlich, 1968) elevated public concerns arguing that population growth is the principle threat to the environment. Geisel writes in the midst of a swirl of distinguishable albeit interconnected concerns. His story presents deforestation and the destruction of habitat as he simultaneously accuses and convicts the unexamined commitment to economic growth and excessive consumerism as causes of environmental degradation, which simplifies the complexity of the relationship between people and the planet and, more importantly, accommodates production of a comprehensible children's story.

Commentary on Text

The symbolism of the ashamed adult relinquishing the remaining seed to a child is unmistakable. The adult abdicates responsibility of the environment essential to the survival of future generations and chooses to entrust the remaining seed to a child, innocent of his ancestors' malfeasance, with hope that the child will serve as a better steward of the

seed to revive the lost beauty and bounty. Implicit in the timing of this concession is the self-awareness of the Once-ler that, despite surviving in the devastation that he caused, he, nonetheless, failed to act despite possessing the final seed. Might Geisel be suggesting that adult readers possess the potential to repair environmental damage, yet are unable to act?

The symbolic references to American values are similarly undeniable. We observe a young Once-ler arriving in a prairie sooner, suggestive of the iconic pioneers who were willing to endure extreme hardship for an opportunity to derive an existence from the bountiful land. The Once-ler possesses numerous qualities generally celebrated in capitalist economic systems. He is creative, enthusiastic, inventive, and ambitious. Moreover, he exhibits a strong work ethic, albeit in the production of a good with an undetermined purpose and no discernible aesthetic appeal. Meanwhile, faceless consumers buy the product, unconcerned with its unstipulated utility and disinterested in the unobserved environmental consequence of its production.

Central to the story is the absence of interaction between the Once-ler and buyers of the Thneed. Disassociation from the environmental impact of Thneed production parallels the estrangement between producers and consumers. Mauss (2000/1925) suggests that exchange was not always transactional. Geisel's visual illustrates commodity exchange inherent in market-based economies. The two-page spread portrays two independent actors engaging in a quantitative relationship involving the immediate exchange of alienable goods. The obscured faces exemplify exchange based on the transfer of one object, a Thneed, for another object, money. The Once-ler defines success when he receives \$3.98. Alienated from the buyer and uninterested in utility and beauty, the Once-ler is oblivious to the consequences of his narrowly defined success.

Similar to nature itself, *The Lorax* lacks power to defend flora and fauna from the primacy assigned to production growth, *biggering*, inherent in market economies. *The Lorax* apparently possesses some unsourced authority but cannot halt the actions of the Once-ler. Moreover, nature lacks an inalienable right to exist, which contrasts with the apparent right of the Once-ler to exhaust the natural environment to profit by satisfying the demand for a superfluous product. All *The Lorax* can do is verbally assail the Once-ler. With each reprimand, *The Lorax*, society's *superego*, is increasingly disappointed and angry, yet the Once-ler, society's *ego*, soldiers on in pursuit of profit, albeit rationalized as serving a previously unmet need, a need that did not exist prior to creation of the Thneed. Interestingly, the Once-ler retains a single seed, ultimately to entrust to someone able to obey one's conscience. Empathetic readers might be tempted to cast the Once-ler as a tragic hero, whose fatal flaw of greed led to his demise, but it is difficult to assign substance to his temporary fortune due to the absurdity of the Thneed and the extensive destruction imposed on the environment.

Shortly after the last *Truffula* tree falls, production ceases, the abandoned landscape is dark and devoid of the vibrant life so enchanting at the beginning of the tale. The Once-ler retreats into his residence isolated and alone surrounded by the unpleasant consequences of his actions. Notably, the Once-ler experiences no socially imposed consequence for transforming the landscape and disrupting the ecosystem. The self-imprisonment and unwillingness to permit the narrator to view his face imply a sense of shame and, thus, a hint of self-awareness that may motivate his protecting the single seed.

With the depletion of the natural environment, the labor of his family is no longer needed. The faceless, perhaps soulless, workers speed off in search of their next purposeless employment. It is tempting to consider that Seuss is alluding to Heidegger's central concern expounded in his essay, *The Question Concerning Technology*; however, although published in German in 1954, the essay was not translated into English until 1977. Nonetheless, the imagery illustrates Heidegger's concept of *enframing* nature and his concern that even human beings would be relegated to mere resources. However, Mancuse (1964) publishes *One-dimensional Man* in English.² His thesis emphasizes the irrationality of consumers whose search for social connection, in an increasingly disconnected world, explains

² Mancuse and Heidegger studied under Husserl. In 1932, Mancuse published Hegel's *Ontology and the The Theory of Historicity*, which is believed to be heavily influenced by Heidegger. Mancuse emigrated to the US in 1934 but would likely be aware of and able to read Heidegger's book in the original German.

consumption of new products with no concern of the negative effects on the environment or themselves. The insidious consequence of the misplaced freedom, according to Mancuse, is the indifference supported by affluence that sustains the social order and thwarts any desire for change. From this perspective, one might speculate that the absence of consequences for environmental destruction compensates perpetrators who unwittingly support the status quo.

The Lorax is not an allegory; similarly, there is no nuance nor subtlety. Seuss condemns modern capitalism that relies on consumerism and disregard for consequences to the environment and, perhaps, the human beings entrapped by the ethos. Albeit, not as commercially successful as his other books (MacDonald, 1988), *The Lorax* has inspired many applications and considerable commentary. The industry that emerged from this single work of children's fiction ranges from advocates who embrace the cautionary tale as an instructive teaching tool to challengers who question the literary value and ideological idealism.

Applications and Challenges

Dr. Seuss and *The Lorax* garner academic interest from scholars across a breadth of disciplinary interests. Miller and Watts (2011) offers insight into the magnitude of interest reporting that the ERIC database returned seventy items for Seuss and seven items when searching *Lorax*. A decade later, searches for *Seuss* and *Lorax* return ninety-four and sixteen items, respectively, revealing the enduring interest in both the author and *The Lorax* as vehicles for teaching and scholarly pursuits.

The scope of applications of *The Lorax* reflects the appealing story and illustration of the book as well as the significance of the topics. *The Lorax* has been applied to a breadth of academic disciplines ranging from reading (Rule & Atkinson, 1994; Marshall, 1996; Dymock, 2007), mathematics (Kurz & Bartholomew, 2012), and education (Rodgers, Hawthorne, & Wheeler, 2007; Johansson, 2011; Plankis, Ramsey, Ociepka, & Martin, 2016) to business (Greenwood, 2000; Feger & Thomas, 2011;), science (Teorey, 2014), philosophy (Johansson, 2011), and economics (Hammock, Mixon, & Parono, 2000; VanFossen, 2003; Rodgers, Hawthorne, & Wheeler, 2007; Miller & Watts, 2011).

Interest in *The Lorax* extends beyond classroom applications. Rankin-Gouthro (2011) evokes the conflict between the Once-ler and *The Lorax* to illustrate how planners and policy makers can benefit from scenario building to find a shared vision needed to reduce the inherent uncertainty affecting environmental projects. Legal scholars contextualize analysis of Supreme Court decisions (Kurz, 2007; Wenstock, 2009), argue that lawyers have a moral obligation to advise environmental advocates like *The Lorax* (Rizzardi, 2012), and illustrate how a defense attorney's strategic *voir dire* can contribute to seating a fair jury for an unsympathetic client like the Once-ler (Mitchel, Hofstetter, & McLaughlin, 2012). Most commonly, *The Lorax* serves as a vehicle to address environmental responsibility (Rule & Atkinson, 1994; Maniates 2001; Pleasants, 2006; Lowell, 2008; Schnoor, 2008; Wolfe, 2008; Sloane, 2010; Miller and Watts 2011; Rankin-Gouthro, 2011; Kopnina, 2012; Teorey, 2014).

Despite enduring popularity, *The Lorax* is criticized on its merits and used to challenge the matured environmental movement (Hammock, Mixon, & Parono, 2000; Pleasants, 2006; Boggs, Wilson, Ackland, Danna, & Grant, 2016). On its merits, Hammock, Mixon, and Parono (2000) contends that the scenario presented in the parable is unlikely. The authors note that the premise ignores basic economic principles and that incentives present in a market-based economy would intervene to prevent the environmental destruction depicted in the text. In a market-based economy comprised of self-interested actors, the Once-ler would likely raise the price, given the demand, to maximize profit. The higher price would ration the known reserve of Truffula trees. This criticism can be challenged.³ To begin, the authors ignore economic history. Whaling in the Atlantic Ocean, westward migration of cotton farmers and the Dust Bowl of the 1930s are familiar examples of human beings exhausting the environment to their economic detriment. More notably, the authors ignore the scholarship addressing the well-established idea of the

³ A related challenge centers on market failure. The concept of market failure, notably negative externalities, was well established by the 1960s. Buchanan and Tullock (1962) addressed the persistence of government failure to offer explanations for government inability to internalize (social) costs of the externality.

tragedy of the commons first identified by William Foster Lloyd (1833).⁴ H. Scott Gordon (1954) rigorously applied the concept to fisheries prior to Garrett Hardin (1968) popularizing the concept shortly before publication of *The Lorax*.

Pleasants (2006) argues that *The Lorax* reflects a North American bias and recommends alternative texts for young readers in Australia, while Boggs, Wilson, Ackland, Danna, and Grant (2016) contends that *The Lorax* fails to present to children the complexity of environmental concerns. To address the shortcoming, these authors offer criteria including the depth of scientific thinking to evaluate children's texts. These challenges do not diminish the efficacy of the text, but rather illustrate the global reach of the text over time and its value as an educational tool to advance a message and to encourage debate.

Competing Perspectives: Shallow vs. Deep Ecology

Scholars use *The Lorax* to frame discussions of environmental movements and environmental education (Lubduska, 1994; Marshall, 1996; Maniates, 2001; Wolfe, 2008; King, Segerson, & Shogrenm, 2010; Kopnina, 2012). Unmistakable in *The Lorax* is an irreconcilable ontological distinction between the biocentric defense of nature represented by *The Lorax* and the anthropocentric land ethic represented by the Once-ler (Lebduska, 1994; Marshall, 1996). The biocentric land ethic contends that nature has as much right to exist as humans (Leopald, 1949). In contrast, an anthropocentric land ethic elevates human beings above all other life. The distinction embodied by *The Lorax* exemplifies "deep ecology" perspective (Naess, 1973; Kopnina, 2012).

Naess (1973) disparages "shallow ecology" that lacks a systematic approach toward the environment. "Shallow ecology" advocates uncoordinated policies like pollution abatement, CAFE standards, energy efficient windows and appliance along with acknowledging natural resource depletion and promoting recycling. Naess, in contrast, favors "deep ecology" which stresses the interdependence of the environment and all aspects of human life. Thus, he laments the entrenchment of "shallow ecology" and argues that "shallow ecology" is evidence of disproportionate power ascribed to economic actors that benefit from the perspective espousing technological solutions to ecological challenges (Anker, 2008). In contrast, "deep ecology" requires evaluating a broad array of social, political and economic issues ranging from consumption behavior, tax policy, trade relations, and immigration policy to access to birth control and political influence of firms. *The Lorax* does not reference "shallow ecology" or "deep ecology" directly, but *The Lorax* visits the Once-ler repeatedly to report the inevitable departure of each species, which implies an interdependency consistent with a "deep ecology" perspective. More blatantly, the indeterminable utility of the Thneed implicates irrational consumerism as a necessary condition for excessive depletion of natural resources, the subsequent pollution, and the *enframing* of workers, even when the workers are relatives. In short, Geisel demonstrates the systematic interdependency of humanity and the environment appropriate for children's fiction.

It is not surprising, therefore, that *The Lorax* exemplifies three of the four laws of ecology introduced by Commoner (1971). First, Geisel infuses *The Lorax* with a *systemic perspective* of the environment, which explains his appearance moments after the demise of the first Truffula tree. Second, the dialogue and the illustration show the reader that *waste persists* as smog, Gluppity-Glupp and Schloppity-Schlopp, rather than disappears. Third, eventually the *exploitation of nature transforms resources from useful to useless* forms as seen when the harvesting of the tufts of the Truffula trees forces the beleaguered fauna to depart. The story omits the law contending that technology intended to improve upon nature ultimately harms nature, which implies *nature knows best*, although one may argue that *The Lorax*, in speaking for the trees, embodies the essence of the fourth law.

Geisel's theme, text and illustrations reveal preference for "deep ecology" associated with a biocentric land ethic. Yet, one-half century later, the anthropocentric land ethic dominates public policy with nature sacrificed for economic wealth (Lebduska, 1994). Modern property rights originate from the Lockean contention that ownership

⁴ Oxford University published the original lectures; however, *Population and Development Review* published the lectures in 1980. See: Archive (1980). W. F. Lloyd on the checks to population, *Population and Development Review*, 6(3), 473-496.

is derived from the application of human labor to natural resources (Locke, 1948[1693]). Locke's assertion underpins the Once-ler's *natural* right to appropriate the Tuffala trees and to sell Thneeds. Often omitted when revisiting Locke's basis for property rights is the rider that individuals are not to extract more than needed from nature to ensure sufficient natural resources availability for all. The intertemporal component of this rider serves to distinguish shallow and deep ecology perspectives. The concern that nature will be unable to sate human needs is not a recent development.

The Malthusian Trap asserts that "geometric" population growth would overwhelm "arithmetic" food production growth and, thus, doom humans to a subsistence existence (Malthus, 1970/1798). Malthus's analysis and proposed solutions led Thomas Carlyle to label economics the "dismal science" (Beggs, 2020). Kling, Segerson, & Shogren (2010) contrast Malthus and Seuss by contending that Malthus was concerned with how to harness nature, whereas Seuss confronted the challenges resulting from human mastery of the environment. Writing at the end of the eighteenth-century Malthus was concerned with population growth in relation to discoveries of arable land. More than a century later, Geisel was concerned with the actions of technology-empowered human beings. As science contributes to knowledge, the application of scientific knowledge (e.g. nuclear weapons and "Super-Axe-Hacker") is not necessarily progress as the innovation may impose substantial cost on the environment just as not all work, creativity, and inventiveness is necessarily beneficial.

Industrialized societies enlist science and technology to alleviate the adverse consequences of progress (Heidegger, 1977; Kelley and Knowles, 2016). Malthus could not imagine the technological innovation that would permit the planet to support a far greater population. While Malthusian concerns are often dismissed in the twenty-first century, reformulating the argument in terms of ecological sustainability transforms Malthus's jeremiad from a premature premonition to foreshadowing the boundless demands humans impose on the environment.

Malthusian concerns regained prominence in the late 1960s with the publication of *The Population Bomb* by Paul R. Ehrlich (1968). Ehrlich captured the attention of the general population and the media with predictions of massive starvation and death resulting from unabated population growth. Increasing affluence exacerbated concerns regarding exhausting the environment (Ehrlich & Holdren, 1971). Opponents argued that the prescriptions of the "deep ecology" perspective were unnecessarily disruptive because technological innovation offsets demands imposed by population growth (Boserup, 1965; Simon, 1980; Friedman, 2005). Indeed, in the past half century, the global population more than doubled without realizing the apocalyptic predictions; however, food production increased at a cost to the environment.⁵ Fifty years later, the "deep ecology" perspective of *The Lorax* remains marginalized relative to the "shallow ecology" perspective dominating politics and perpetuated through education policy and business practice. Political power is, in part, maintained through ideology, and government perpetuates the status quo to serve those that benefit (Buchanan & Tullock, 1962; Althusser, 1971/1969). It is, therefore, instructive to consider how federal and local government normalize the "shallow ecology" perspective.

Institutionalized Anthropocentrism – Role of Government

Education policy normalizes ideals and perspectives. Compliance with federal policy initiatives impacts education funding for states. To offer an example, the U.S. federal government promotes STEM education in response to global competition and environmental challenges (Kelley & Knowles, 2016). Education policy and funding priorities that emphasize science, technology, engineering, and mathematics (STEM) education reflect and reinforce the anthropocentric land ethic.

Government policy and proponents of STEM education initiatives emphasize attractive employment opportunities (McDonald, 2016), which is odd given that in a market economy, workers will pursue educational opportunities and employment in response to a combination of individual preferences, compensation, working conditions, and

⁵ Beginning in the 1950s and 1960s, the Green Revolution contributed to greater food production. At present, carbon dioxide emissions from tillage, fertilizer run-off and toxic algae blooms, water use for irrigation, and excessive methane emissions from feedlot cattle are recognized environmental challenges.

benefits, compared to an alternative. For government to disregard the allocative efficiency of the labor market reveals that policy makers are unaware of the efficacy of the price mechanism, which is unlikely, or that initiatives serve special interests. For example, consider how increasing the supply of STEM graduates serves the interests of producers seeking lower labor cost.⁶ Lower production cost resulting from less expensive labor necessarily increases production intended for mass consumption, which imposes upon environmental sustainability.⁷

In the US, the STEM Education Strategic Plan identifies STEM literacy, diversity, and workforce development as primary goals. The initiative's vision is for the US to achieve global leadership in STEM employment (Committee on STEM Education, 2018). Remarkably, three of the 174 (1.7 percent) spending initiatives representing 0.001793 percent of the \$3.7 billion initiative relate directly to environmental sustainability (Office of Science and Technology Policy, 2020). The emphasis on employment and the minimal funding allocated toward environmental sustainability reveals the disconnection between the policy and the biocentric land ethos.

At the local level, schools reinforce the anthropocentric ethos by assiduously addressing state government standards. State-imposed learning standards emphasize use of the environment to serve the population and identification of technology and engineering solutions to address subsequent challenges (Ohio Department of Education, 2010 & 2011). Environmental education featuring "othering" of nature to accommodate market-based economic systems perpetuates the anthropocentric paradigm (Wilson, 1992; Ronda, 1992). The standards normalize the "shallow ecology" perspective.

Maniates (2001) asserts that *The Lorax* embodies the well-informed and polite proponent of environmental sustainability. The imposition on children likely resonates with readers who embrace Continental Enlightenment ideals of intergenerational improvement and human perfectibility postulated by Rousseau (2004/1754). If funding priorities and learning standards normalize a biocentric land ethic, the next generation of polite proponents of environmental sustainability may be unprepared to act individually or collectively. Transitioning to a "deep ecology" perspective faces formidable barriers, most notably the political influence of commercial enterprises that benefit from the prevailing "shallow ecology" perspective.

Institutionalized Anthropocentrism – Role of Commercial Enterprise

The Lorax reflects the prevailing American response to environmental concerns by emphasizing individual behavior to reverse environmental degradation and to support environmental sustainability. "Individualization" describes the responsibility of environmental sustainability imposed upon individual actors, specifically, consumers, who are encouraged to make "smart" decisions in the marketplace (Maniates, 2001). Education policy and state standards require schools to present this perspective to schoolchildren. Advocates of a biocentric land ethic will argue that environmental sustainability requires a collective effort inconsistent with "smart" individual consumption decisions. Commercial interests that benefit from the anthropocentric ethos advance the perspective through marketing and advertising practices. By 1990, marketers spent \$500 million targeting children (Durning 1993). According to the American Psychological Association (2004) marketing expenditures targeting children are estimated to be \$12 billion annually. By 2019, advertising expenditures specifically targeting children reach \$4.2 billion (Marketing Charts, 2019). Children may not earn income, but children influence household consumption decisions.

The 2012 theatrical adaptation of *The Lorax* deviates from the original text and features a youthful Once-ler with guitar in hand traveling to town to promote the Thneed. The song lyrics begin, "Everybody needs a Thneed, A fine thing that all people need, the Thneed is good, the Thneed is great..." (Powell & Paul, 2012). Subsequent stanzas offer more than a dozen potential uses for an extensive, albeit vague, array of potential buyers. Inclusion of the song in the film emphasizes the role of advertising in promoting consumption of superfluous goods and further condemns

⁶ More insidious, government promotion of STEM education may misallocate labor, which suggests that the policy places the well-being of special interests above the well-being of the individual.

⁷ In addition to lower labor cost, theory predicts that an increase in STEM graduates improves production efficiency further reducing production costs to increase profit.

irresponsible producers and irrational consumers.⁸ Advertising can be informative; however, advertising is also utilized to create needs that do not otherwise exist (Galbraith, 1952).

Beginning in the 1960s, corporations embraced “green marketing” to appeal to consumer preferences for environmentally friendly practices (Meyer, 2010). Reliable aggregate marketing and advertising expenditure data specific to “green marketing” are unknown, however surveys report that approximately sixty percent of consumers are willing to buy “green” products on the condition that the goods are less expensive or offer savings for buyers (Mondalek, 2016). In contrast, a sixty-country Nielsen poll of 30,000 consumers found that seventy-three percent of millennials acknowledge a willingness to pay more for products identified as sustainable (Curtin, 2018). Despite the absence of data to provide magnitude of the phenomenon, Westerveld (1986) reports that “green marketing” inspires “green washing,” which involves fraudulent claims of sustainable practices.

The Sustainable Apparel Coalition (SAC), composed of 150 of the largest fashion brands, introduced the Higg Index (HI) in 2011 to measure the environmental impact of the participating brands and to reduce water and harmful chemical usage. The SAC does not make available the HI algorithm, but the coalition reports incorporating independent studies and consulting experts. Based on the HI algorithm, synthetic materials like “pleather” (plastic leather) are rebranded as environmentally responsible (Tabuchi, 2022). Another opportunistic practice is observed in the hospitality industry. Upon entry into a room, a placard informs customers that daily linen and towel service is no longer the norm. The notice justifies the new standard in terms of conserving water and energy. It is also the case that less frequent housekeeping eases the demand for labor and decreases related expenses for detergent and cleaning materials in addition to reducing water and energy costs. In short, the new practice contributes to profits.

More insidious to the “deep ecology” and biocentric ethos is the appropriation of environmental concerns by commercial interests to promote self-interest at the expense of the environment. Consider the small paper or plastic bag in which the dental hygienist inserts floss, toothpaste and a toothbrush. Many bags feature the logos of the products deposited in the bag along with a message linking healthier smiles with a healthier planet when we recycle the sack. The packaging of the floss, toothbrush, and toothpaste also depict the logo and brand of each product. While perhaps a convenience for a small proportion of departing customers, the sack is superfluous. Its greater purpose is to promote the brands as customers parade through the waiting room toward the exit. The importance of oral health maintenance is not in question; however, the provision of the small bag violates “deep ecology” perspective.

Environmental Education: Supplementing *The Lorax*

Education standards present competition between the environment and consumption (Lubduska, 1994). Environmental education featuring “othering” of nature to accommodate market-based economic systems perpetuates the anthropocentric paradigm (Wilson, 1992; Ronda, 1992). *The Lorax* illustrates the trade-off as deforestation is presented initially as the acceptable consequence of meeting the consumption demands of consumers. *The Lorax* appears to satisfy Griener’s (1983) definition of meaningful ecology-fiction because the story connects actions of people and prevailing attitudes. Criticism of *The Lorax* as an effective tool to communicate with young children hinges on both the message itself and the delivery. For many critics Seuss does not go far enough. Rule and Atkinson (1994) provide an annotated list of children’s books with an ecological theme to supplement *The Lorax*.

Environmental education does not depend solely on books. Games, table top and computer, at all levels of education, offer opportunities to engage students and to facilitate discussion that connects complex issues (McClough, 2021). Mostowi, Koleini, and Khorramar (2016) provide evidence of how role playing games improve

⁸ Advertising is unlikely solely responsible for consumption of superfluous products. Say’s Law (Say, 1964/1803) observed that supply creates its own demand. Veblen (1979/1899) contended that conspicuous consumption and conspicuous waste afforded status to consumers.

management of natural resources, and Rodela, Ligtenberg and Bosma (2019) argue that serious games can affect positive changes in resource management.

Feature films address environmental themes. Animated films, while targeting children, often address provocative themes. The 2008 Pixar release, *Wall-E*, portrays an uninhabitable earth. Humans evacuated the planet, leaving behind solar-powered robots to clean-up the mess and symbolically rebuild the former “great” cities using bricks of compressed garbage. Humans return to earth when a single seedling emerges as evidence that the planet can again support life. The financial success of *Wall-E* may have motivated the 2012 release by Universal Pictures of a substantially embellished version of *The Lorax*. In the animated feature, a new character, Mr. O’Hare, serves as the foil to the narrator whose interest in growing trees threatens O’Hare’s commercial interest to sell air. The onscreen competition perpetuates the belief in a trade-off between the environment and commercial interests. In addition, the inclusion of a self-interested monopolist suggests that property rights may not necessarily be the solution to avoiding environmental devastation, as critics of *The Lorax* contend (Hammock, Mixon, & Patrono; 2000). To justify a feature film, the original book required additional story lines, but Mr. O’Hare and, especially the pointless love interest add little substance to the original story. In both films, environmental devastation results from human activity and the future hinges on the survival of a single seed. This message likely resonates with young viewers.

Conclusion

One-half century after publication of *The Lorax*, it is appropriate to assess the environmental movement. The United Nations’ Kyoto Protocol was adopted in 1997 and entered into force in 2005; and the Paris Agreement was adopted by 196 parties in 2015 and entered into force in late 2016. These international treaties contain no enforcement mechanism but rather reflect commitments to principles intended to limit greenhouse gas emissions (Maizland, 2022). The most significant contribution of the treaty may be the acknowledgement that the environment is a global public good requiring international cooperation rather than uncoordinated smart consumption decisions. Signatories accept specified emissions reduction targets. The compliance with reduction targets represents a collective action challenge as no party to the treaty has an incentive to act in the absence of action by others. The challenge remains to galvanize domestic political support for climate change initiatives.

In western democracies, domestic political support follows the preferences of the electorate. In the US, the environment is not a leading priority. Prior to the 2022 midterm elections, registered voters ranked climate change last of seven topics.⁹ Incidentally, eighty-five percent of respondents identified the economy as extremely important or very important. In contrast, forty-five percent of registered voters identified climate change as extremely important or very important (Saad, 2022). Economic well-being is important; however, environmental sustainability is a necessary condition for economic security.

Challenging the prevailing anthropocentrism and reversing the *enframing* of resources identified by Heidegger involves establishing the dependency of the economy on the environment. Challenging convention that subordinates natural resources to humans can take place outside the classroom, but learning in the classroom is communal and reaches more children, who may adopt a biocentric land ethic with an appreciation that the economy is not separate from the environment.

For decades, the spirit of the environmental movement emphasized messages appealing to individual behavior. Individuals are encouraged to curb certain behaviors and to conserve resources. Commercial interests advertise consumption of particular products to meet these objectives. In addition, staging events raises awareness of environmental challenges and raises money to fund environmental initiatives, but the message of Maniates (2001) resonates: uncoordinated individual effort cannot aspire to achieve the level of collective action needed to alter the prevailing environmental ethos. Not until an ethos that accounts for the environment is embraced can meaningful change occur.

⁹ The environmental movement and climate change are not identical. Climate change is frequently the term used in polls to refer to the trace remnants of the environmental movement.

Advocating isolated individual acts portends nefarious unintended consequences, as individuals believe themselves to be making a difference when they are not. Duped by this misperception, individuals will be less inclined to support large-scale initiatives needed to curtail environmental decline. Emphasis on individual actions appeals to a sense of duty indicative of a deontological ethic; however, progress requires an alternative paradigm that replaces the prevailing utilitarian ethic that justifies market-based economics with a fuller understanding of the costs associated with mass production and consumption. Had the Once-ler included the full cost associated with sustaining the ecosystem, the Thneed would have been more expensive. At a higher price, faceless consumers would buy fewer Thneeds and the impact on the environment would be reduced. Internalizing external costs requires government involvement, which requires broad political support.

Geisel wanted to promote the environmental movement, and he has. *The Lorax* remains a powerful story that influences readers with a message that resonates five decades later. The proliferation of children's books and the emergence of new communication technology extends the possibility to inform and inspire. In 1972, the television adaptation required substantial modification to avoid angering the sponsors. In contrast, explicit dialog and catchy songs pervade the 2012 film. Communication technology now exists to institutionalize an environmental ethos to affect meaningful change. It may be that there is a place for *biggering* and more *biggering* after all.

References

- Althusser, L. (1971). *Lenin and philosophy and other essays*. (B. Brewster, Trans.). New Left. (Original work published 1969)
- Anker, P. (2008). Deep ecology in Bucharest. *The Trumpeter*, 24(1), 56-67.
- Archives (1980). W. F. Lloyd on the checks to population, *Population and Development Review*, 6(3), 473-496.
- Beggs, J. (2021, March 11). Economics as the "Dismal Science". ThoughtCo. <https://www.thoughtco.com/economics-as-the-dismal-science-1147003>
- Boggs, G. L., Wilson, N. S., Ackland, R. T., Danna, S. & Grant, K. B. (2016). Beyond *The Lorax*: Examining children's books on climate change. *Reading Teacher*, 69(6), 665-675.
- Boserup, E. (1965). *The conditions of agricultural growth*. Aldine Publishing Co.
- Buchanan, J. & Tullock, G. (1962). *The calculus of consent: Logical foundations of constitutional democracy*. University of Michigan Press.
- Carson, R. (1962). *Silent Spring*. Houghton Mifflin.
- Committee on STEM Education. (2018). Charting a course for success: America's strategy for STEM education. White House. <https://www.whitehouse.gov/wp-content/uploads/2018/12/STEM-Education-Strategic-Plan-2018.pdf>
- Commoner, B. (1971). *The Closing Circle: Nature, Man, and Technology*. Knopf.
- Curtin, M. (2018). 73 Percent of Millennials Are Willing to Spend More Money on This 1 Type of Product. Inc.com, <https://www.inc.com/melanie-curtin/73-percent-of-millennials-are-willing-to-spend-more-money-on-this-1-type-of-product.html>
- Czitrom, D. J. (1985). Review: The culture of consumption. *Journal of American History*, 71(4), 888-889.
- Dominy, N. J., Winters, S., Pease, D. E., & Higham, J. P. (2018). Dr. Seuss and the real *Lorax*. *Nature Ecology & Evolution*, 2(8), 1196-1198.
- Dymock, S. (2007). Comprehension strategy instruction: Teaching narrative text structure awareness. *Reading Teacher*, 61(2), 161-167.
- Durning, A. T. (1993). American Excess: Are we shopping our planet to death? *E Magazine*. Jan/Feb, 26-35.
- Ehrlich, P. R. (1968). *The Population Bomb*. Sierra Club/Ballantine Books.
- Ehrlich, P. R. & Holdren, J. P. (1971). Impact of population growth. *Science*, 171(3977), 1212-1217.
- Friedman, B. M. (2005). *The moral consequences of growth*. New York, NY: Alfred A. Knopf.
- Fox, R. W. & Lears, T. J. (1983). *The culture of consumption: Critical essays in American history, 1880-1980*. Pantheon.
- Fuller, B. (1968). *Operations manual for spaceship earth*. Lars Muller Publishers.
- Galbraith, J. K. (1952). *The Affluent Society*. Houghton Mifflin
- Geisel, T. (1971). *The Lorax*. Random House.
- George, H. (1879). *Poverty and Progress*. J. M. Dent.

- Gordon, H. S. (1954). The economic theory of common property resource: The fishery. *Journal of Political Economy*, 62(2), 124-142.
- Greenwood, M. (2000). The study of business ethics: A case for Dr. Seuss. *Business Ethics*, 9(3), 155-162.
- Greiner, P. (1983). Radical environmentalism in recent literature concerning the American west. *Rendezvous*, 19(1), 8-15.
- Hammock, M., J. Mixon, Jr., W. & Parono, M. F. (2000). Lessons from *The Lorax*. *Journal of Private Enterprise*, 16, 116-127.
- Hardin, G. (1968). Tragedy of the Commons, *Science*, 162(3859), 1243-1246.
- Heidegger, M. (1977). *The Question Concerning Technology*. Harper & Row, 3-35.
- Johansson, V. (2011). In charge of the Truffula seeds: On children's literature, rationality and children's voices in philosophy. *Journal of Philosophy of Education*, 45(2), 359-377.
- Kelley, T. R. & Knowles, J. G. (2016). A conceptual framework for integrated STEM education. *Journal of STEM Education*, 3(11), 1-11.
- Kling, C. L., Segerson, K. & Shogren, J. E. (2010). Environmental economics: How agricultural economists helped advance the field. *American Journal of Agricultural Economics*, 92(2), 487-505.
- Kopnina, H. (2012). *The Lorax* complex: deep ecology, eco-centrism and exclusion. *Journal of Integrative Environmental Science*, 9(4), 235-254.
- Kurz, D. M. (2007). The return of *The Lorax*: Massachusetts v. EPA, 127 S. Ct. 1438, Can states speak for the tree? *Nebraska Law Review*, 87, 1055.
- Kurz, T. L. & Bartholomew, B. (2012). Rethinking Dr. Seuss's *The Lorax* Mathematically. *Mathematics Teaching in Middle School*, 18(3), 180-182.
- Lebduska, L. (1994). Rethinking human need: Seuss's *The Lorax*. *Children's Literature Association Quarterly*, 19(4), 170-176.
- Leopold, A. (1949). *A sand county almanac*. Ballantine.
- Lloyd, W. F. (1833). *Two lectures on the checks to population*. Oxford University.
- Locke, J. (1948). *The second treatise of civil government and a letter concerning toleration*. B. Blackwell.
- Lowell, C. (2008). Beyond *The Lorax*? The greening of American curriculum. *Phi Delta Kapan*, 90(3), 218-222.
- MacDonald, R. (1988). *Dr. Seuss*. Twayne.
- Maizland, L. (2021). Global climate agreements: Successes and failures. Council of Foreign Relations.
<https://www.cfr.org/background/paris-global-climate-change-agreements#:~:text=The%20Kyoto%20Protocol%20required%20only,countries%20to%20set%20emissions%20targets>
- Malthus, T. (1970). *An essay on the principle of population*. Penguin Books. (Original work published 1798)
- Maniates, M. F. (2001). Individualization: Plant a tree, buy a bike, save the world? *Global Environmental Politics*, 1(3), 31-52.
- Marketing Charts (2019). Traditional media to retain lead in advertising to kids. Marketing Charts.
<https://www.marketingcharts.com/advertising-trends/spending-and-spenders-109070>
- Marshall, I. S. (1996). *The Lorax* and the Ecopolice. *Interdisciplinary Studies in Literature and Environment*, 2(2), 85-92.
- Marcuse, H. (1964). *One-dimensional Man*. Beacon Press.
- Mauss, M. (2000). *The Gift*. (W. D. Halls, Trans.) W. W. Norton. (Original work published 1925)
- McClough, D. (2021). Rolling the Dice to Learn in Social Studies. *The Clearing House*, 94(1), 1-7.
- McDonald, C. V. (2016). STEM education: A review of the contribution of the disciplines of science, technology, engineering, and mathematics. *Science Education International*, 27(4), 530-569.
- Meadows, D. H., Meadows, D. L., Randers, J. & Behrens III, W. W. (1972). *The Limits to Growth*. Potomac Associates.
- Meyer, R. (2010). A history of green brands, 1960s and 1970s: Doing the groundwork, *FastCompany.com*.
<https://www.fastcompany.com/section/50-years-of-green>
- Miller, B. & Watts, M. (2011). Oh, the economics you'll find in Dr. Seuss! *Journal of Economic Education*, 42(2), 147-167.
- Mitchel, J. R., Hofstetter, J. & McLaughlin, C. A. (2012). Lessons from *The Lorax*: Jury selection in difficult cases. *FDCC Quarterly*, 62(3), 254-262.
- Mondalek, A. (2016, May 10). Poll: How much do you spend on green purchases a year? Money.com.
<https://money.com/poll-spending-green-purchases-sustainability/>

- Motavalli, J. (2011, February 12). The history of greenwashing: How dirty towels impacted the green movement." *AOL.com*. <https://www.aol.com/news/2011-02-12-the-history-of-greenwashing-how-dirty-towels-impacted-the-green.html>
- Mostowfi, S., Mamaghani, N. K. & Khorramar, M. (2016). Designing playful learning by using educational game for children in the age range 7-12: (A case study: Recycling and waste separation education board game). *International Journal of Environmental and Science Education*, 11(12), 5453-5476.
- Naess, A. (1973). The shallow and the deep, long-range ecology movement: A summary. *Inquiry: An Interdisciplinary Journal of Philosophy and the Social Sciences*, 16, 95–100.
- Office of Science and Technology Policy. (2020). Progress report on the implementation of the federal STEM education strategic plan. <https://www.whitehouse.gov/wp-content/uploads/2017/12/Progress-Report-Federal-Implementation-STEM-Education-Strategic-Plan-Dec-2020.pdf>
- Ohio Department of Education. (2010). Ohio's new learning standards: Social Studies Standards. <https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Social-Studies/Ohio-s-Learning-Standards-for-Social-Studies/SS-Standards.pdf.aspx?lang=en-US>
- Ohio Department of Education. (2011). Ohio's new learning standards: Science Standards. <http://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Science/Ohios-Learning-Standards-and-MC/ScienceStandards.pdf.aspx?lang=en-US>
- Pease, D. (2010). *Theodor SEUSS Geisel*. Oxford University Press.
- Plankis, B., Ramsey, J., Ociepka, A., & Martin, P. (2016). *The Lorax* reader's theater. *Science and Children*, 53(7) 34-40.
- Pleasants, K. (2006). Does environmental education need a thneed? Displacing *The Lorax* as Environment text. *Canadian Journal of Environmental Education*, 11, 179-194.
- Powell J. J. & Paul, C. (2012). You need a Thneed [Song]. Dr. Seuss' *The Lorax*. Illumination Entertainment.
- Rankin-Gouthro, E. (2011). *The Lorax* can win: Using scenario building to create a new vision and invigorate an activist agenda for the Great Lakes St. Lawrence basin. *Electronic Green Journal*, 1(31), 1-22.
- Rizzardi, K. W. (2012). The duty to advise *The Lorax*: Environmental Advocacy and the risk of reform. *William & Mary Environmental Law & Policy Review*, 37(1), 25-75.
- Rodela, R., Ligtenberg, A., & Bosma, R. (2019). Conceptualizing serious games as a learning-based intervention in the context of natural resources and environmental governance. *Water*, 11, 1-15.
- Rodgers, Y. V., Hawthorne, S., & Wheeler, R. C. (2007). Teaching economics through children's literature in the primary grades. *Reading Teacher*, 61(1), 46-55.
- Ronda, B. (1992). An American canon of children's literature. In G. E. Sadler, (Ed.), *Teaching children's literature: Issues, pedagogy, resources* (pp. 32-39). Modern Language of America Association.
- Rosado-Feger, A. L. & Thomas, G. A. (2011). Bailing out the Once-ler: Using Dr. Seuss to teach operations management. *Decision Sciences Journal of Innovative Education*, 9(1), 69-73.
- Rousseau, J. -J. (2004). Discourse on the origin of inequality. (G. D. H. Cole, Trans.). Dover Publications. (Original work published 1754)
- Rule, A. & Atkinson, J. (1994). Choosing picture books about ecology. *Reading Teacher*, 47(7), 586-891.
- Saad, L. (2022, October 31). Economy is top election issue; abortion and crime next. Gallup. <https://news.gallup.com/poll/404243/economy-top-election-issue-abortion-crime-next.aspx>
- Say, J. B. (1964/1803). *A Treatise on Political Economy*. A. M. Kelley. (Reproduction of 1880 ed. C. R. Princep, Trans. of 4th French edition. Original work published 1803)
- Schnoor, J. L. (2008). Species Matter. *Environmental Science and Technology*, 42(7), 2207.
- Shi, D. (1984). Review: The triumph of the therapeutic. *American Quarterly*, 36(5), 705-712.
- Silveira, S. J. (2004). The American Environmental Movement: Surviving through Diversity. *Boston College Environmental Affairs Law Review*, 28(2), 497-532.
- Simon, J. (1981). *The Ultimate Resource*. Princeton University Press.
- Sloane, A. (2010). Reading *The Lorax*, orienting in potentiality. *Environmental Education Research*, 16(3-4), 415-428.
- Swagler, R. M. (1985). Review: Culture of consumption. *Journal of Consumer Affairs*, 19(1), 200-204.
- Tabuchi, H. (June 12, 2022). Vegan leather: How big brands got into plastic. *New York Times*. Page 1, Section A.
- Teorey, M. (2014). *The Lorax* and Wallace Stegner: Inspiring children's environmental activism. *Children's Literature in Education*, 45, 324-339.
- Thoreau, H. D. (1854). *Walden or Life in the Woods*. Boston, MA: Ticknor and Fields.

- VanFossen, P., J. (2003). Best practice economic education for young children? It's elementary! *Social Education*, 67(2), 90-94.
- Veblen, T. (1979). *The theory of the leisure class*. Penguin (Original work publish 1899)
- Weinstock, R. A., (2009). The Lorax State: Parens Patriae and the provision of public goods. *Columbia Law Review*, 109(4), 798-843.
- Wilcox, B. L., Kunkel, D., Cantor, J., Dowrick, P., Linn, S., & Palmer, E. (2004, February 20). Report of the APA task force on advertising to children. American Psychological Association.
<https://www.apa.org/pi/families/resources/advertising-children.pdf>
- Wilson, A. (1992). *The culture of nature: North American landscape from Disney to the Exxon Valdez*. Blackwell.
- White, K., Hardisty, D. J., & Habib, R. (2019, July-August). The Elusive Green Consumer. *Harvard Business Review*, 124-133.
- Witter, B. (2020, April 8). How Dr. Seuss' 1970 trip to Kenya inspired *The Lorax*. Biography.
<https://www.biography.com/news/dr-seuss-lorax-inspiration>
- Wolfe, D. (2008). The ecological jeremiad, the American myth, and the vivid force of color in Dr. Seuss's *The Lorax*. *Environmental Communication*, 2(1), 3-24.