

The Capitalocene: On the Basis of Selling Nature to Save It

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Introduction

It remains no secret that the decimation of nonhuman life on earth continues in the midst of our catastrophic nexus of biodiversity loss, stratospheric ozone depletion, and ultimately, climate change. In spite of conservation-oriented policies that have been enacted at virtually every level of governance, neither the rate at which biodiversity loss is occurring, nor the pressures underlying ecological disruption have slowed (Redford and Adams 2009). Thus, the failure and disappointment in current models of biodiversity conservation abound. In the face of ecological challenges and a need to shift the concept of biodiversity into a service that poses some benefit to society, the tethering of nature to the economic marketplace, or in other words the commodification of nature, was born. The move towards the use of a market-based mechanism for conservation represents a new phase of environmentalism and appears to hold promise in the pursuit of environmental protection that aligns with our capitalistic ideals; after all, what can an economy usefully do, but grow? (Dempsey 2016). This notion of enterprising nature, however, is merely a smokescreen and is instead associated with incredible risk in its attempt to achieve conservation, often exacerbating the degradation of nature and leaving humankind's relationship with the environment in further disarray. In this essay, I will argue that the commodification of nature's ecosystem services as a means to conservation is not a panacea for all environmental ills, and instead exacerbates environmental degradation because it promotes a reductionist view of nature and leads to the underproduction of nature.

To Make Live, Make Economic: Nature's Survival Requires Commodification

The commodification of nature, while maintaining its roots in the origin of humanity, can be characterized only through a comprehensive understanding of ecosystem services. Within the

academic discourse, ecosystem services refer to the various processes through which natural ecosystems, and all the biological life that exists within them, support the human existence (Daily 1997). In essence, ecosystem services outline the ways in which the natural environment confers benefits to humanity and is fundamentally based on the pervasive notion that nature exists primarily to serve us. Since the dawn of the European colonial expansion, payment for ecosystem services has been exploited as a method to maintain the economic output of the colonies, or what today would be referred to as the majority and minority world countries, an alternative form of the terms developing and developed countries, respectively (Alam 2008). It is only within the mid-17th century that a coherent awareness and documented body of information expressed the finite nature of our environment, and with extension, our use of ecosystem services (Redford and Adams 2009). Since then, an understanding of the need for conservation has given rise to a plethora of biological, social, and economic movements aimed at curbing the rate of biodiversity loss we are experiencing; however, due to our inherent physical and emotional disconnection from nature, the state of our environment continues to deteriorate.

In response, some academics have turned their gaze towards a widespread financialization of nature to promote conservation. Theoretically, in accordance with the Marx definition of a commodity, the pricing of nature's services and their trade within a free, global market, otherwise known as the commodification of nature, will serve as a mechanism to encourage the sustainable management of earth's resources (McCauley 2006). In a society where a chronic disregard for nature is considered to be a measure of normality, the monetization of ecosystems will convince humans of the value of the natural world. This shift to a market-based mechanism for conservation can be exemplified by the payment for ecosystems scheme occurring in Latin America, particularly Costa Rica. In these regions, prices have been

consistently assigned to environmental services that range from scientific research and bioprospecting, where field researchers or pharmaceutical companies are charged to collect plants and animals, to debt for nature swaps that occur when local funds are invested into conservation to forgive debt (Chomitz et. al 1998). Most notable, however, is the carbon sequestration system that operates primarily out of South America where U.S. based companies pay for reforestation or forest protection to offset their CO₂ emissions (Liverman 2004). The move towards the creation of a niche for conservation within capitalistic markets offers an enticing vision of environmental protection, however, it is one that must be approached with caution.

The Commodification of Nature and The Progress Trap

In the Anthropocene, human existence has been primarily built upon the concept of economic growth and its use as a means to measure progress. In capitalist societies, the notion that all economic growth is good, necessary, and limitless, regardless of the external expenses, underlies our demand for expansion in its multitude of forms. Historically, it is this obsession with economic growth intertwined into a narrative of progress that has led us to a ravenous exploitation of earth's resources and ultimately, the climate catastrophe that threatens the existence of our species (Dale 2015). The commodification of nature and a payment for ecosystem services approach to conservation, while enticing, fits this model dangerously well. Although the financialization of nature generates interest in conservation efforts, while promoting economic growth, it is a progress trap.

On a Reductionist View of Nature

By way of market-based conservation mechanisms, the commodification of the environment fails to account for the co-dependency and interconnectedness of ecosystems,

thereby leading to a simplification of the biophysical environment and the consequent undermining of biodiversity and degradation of natural resources. The homogenization of the environment, similar to the concept of commodity fetishism by Karl Marx, is manifested through a reductionist view of nature. Through the exchange of natural resources as a marketable good, the complex relationships existing within that resource are made invisible and reduced to its most basal counterparts, defined only by exchange-value (Gomez-Baggethun and Perez 2011). Thus, the commodification of nature itemizes the natural environment for monetary valuation, thereby masking complex resources as a single figure of revenue that does not demonstrate the intricacies existing within these biomes. Often, this leads to a shift in the treatment of co-dependent, interconnected ecosystems as discrete units delivering singular services that maximize revenue, yet lack the biodiversity of its predecessors (Redford and Adams 2009). For instance, in the interest of generating profit and the creation of a more lucrative market for ecosystem services, governmental sectors or other private investors often seek to preferentially invest in single ecosystem services such as monoculture or single-species tree plantations over the restoration of ecologically critical and biodiverse ecosystems. In this context, ongoing carbon forestry projects such as REDD+ (Reduced Emissions through Avoided Deforestation and Forest Degradation) seek to make conservation profitable through ascribing a monetary value to standing forests. Rather than placing emphasis on species richness and density, however, these projects often encourage the use of tree species with the highest carbon content (Fletcher et. al 2016). Thus, the commodification of nature gives way to the veiling of biocomplexity, neglecting the notion that all ecosystem functions, both those with a high and low monetary value, are relational and dependent upon one another. Within a single biosphere, biotic and abiotic factors interact to make up cohesive ecosystem services. The reduction of ecosystems to single components, most

commonly to those that are lucrative in the market, undermines the very intent of conservation initiatives (Kosoy and Corbera 2009). As a result, the financialization of ecosystem services itemizes and reduces nature, shifting our comprehension of the natural environment away from a realistic view of how it operates, thereby further contributing to the degradation of the human-environment relationship and ultimately, of nature.

Conditions of Production as a Pre-Requisite to Environmental Degradation

The commodification of nature serves as a mechanism by which ecosystem services are seamlessly integrated into capitalistic systems. In doing so, the natural environment inevitably becomes a condition of production within capital-oriented markets, directly resulting in the underproduction of environmental resources and the eventual degradation of nature. In this context, contemporary Marxist James O'Connor states that conditions of production are all the phenomena upon which capitalism is dependent on for its existence yet is unable to produce itself. Of these conditions of production are all the biophysical resources that exist outside of the ability of capitalism to create (Castree 2010). Through the commodification of nature that enables environmental resources to become conditions of production, nature is henceforth made vulnerable to capitalistic processes of accumulation where limitless economic growth and productivity is sought after. As the environment is integrated as a resource into capitalistic markets that prioritize the accumulation of resources, nature inevitably "underproduces" as its outputs are finite and unable to regenerate at a pace required to meet the demands of the market (Smith 2007). Over time, as the supply rate of natural resources entering the market continues to diminish, nature, as a resource, continually "underproduces". As a result, the commodification of nature subjects natural entities to capitalistic processes of accumulation that have a systematic tendency to overexploit environmental resources, ultimately resulting in its "underproduction"

and further environmental degradation. For instance, the integration of soil into larger market schemes, notably in the hopes of more efficient management, has enabled it to become a condition of production. Due to the processes of accumulation existing at the heart of capitalism, soil, particularly nutrient-dense topsoil with the highest exchange value, continues to be underproduced as its rate of regeneration is unable to meet the demand set in place by market forces. In the context of soil, the demand refers to the commercial activities that are dependent on healthy soils to thrive including, but not limited to, its use in landscaping, gardening, building ventures, and farmland. As soil continues to underproduce, capitalistic markets nevertheless proceed to relentlessly demand the excavation of soil resources, thereby leading to further exploitation and environmental degradation of the world's healthy soils (Mauro and Van Sant 2020). The motivation for profit is the defining feature of capitalism. In allowing the entirety of the natural environment to become conditions of production, conservation is not placed at the forefront and instead, an accumulation of capital becomes the driver of how ecosystem services are controlled (O'Connor 1998). As the monetization of nature continues and the environment is increasingly regarded as a resource to which humanity has no obligation or relationship to, market structures will proceed to exploit natural resources past the point of their production limit to enter new terrains of degradation and destruction (Walker 2017). The deterioration of the natural environment and the commodification of nature are not two separate entities, but rather tied together and commanded by a vortex of accumulation driven by ever-increasing rates of human consumption. As a result, the commodification of nature is unable to serve as a mechanism for conservation because, in order to save nature, the value of earth must not be guided and commanded by capital.

Conclusion

The strategic shift towards an economic valuation of ecosystem services as a tool for conservation theoretically and practically, has great potential to influence human interest in the value of nature. In a society dominated by capitalistic market structures, there seems to be no better method of approaching biodiversity conservation than by allowing it to be compatible with the forces that govern our functioning (Dempsey 2016). In spite of this, the commodification of nature defies the fundamental basis of conservation initiatives and instead acts as a vehicle through which the environment is further degraded because it promotes the notion that nature is comprised of single, quantifiable units and leads to the underproduction of nature. Rather than allowing capitalism to drive conservation, efforts may be better placed in putting environmental protection first and shifting society from a community of consumers, to one of conservers. The primary importance of ecosystems should not be derived from the services that they provide. It is only in recognizing the true value of nature, not delineated by a price tag, that we will be able to release society from the delusions of nature's primary existence as a service provider and achieve environmental salvation.

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