

Scott Prudham's *Knock on Wood*: Nature as Commodity in Douglas-Fir Country

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Knock on Wood presents a persuasive analysis of the contradictions between capitalism and nature, developed through the case of Douglasfir logging, milling and reforesting in the Pacific Northwest. It starts from the spotted owl controversy that dominated debates about public lands, logging and wildlife through the 1990s. Although that controversy has cooled, Prudham provides the kind of historical–geographical depth and understanding that scholars and the public routinely need—but rarely get—in contending with apparent conflicts between environment and economy, conservation and use, wildlife and people.

It was already well known that the 1980s had been a time of accelerated and unsustainable cutting of old growth timber on national forests; that Reagan-era forest policy had more or less preordained a crash in the logging sector sooner or later; and that when it came, it manifest politically in pitched battles between environmentalists and the rural timber-working class. *Knock on Wood* reveals that the crash was inevitable not because of Reagan or James Watt but by the very nature of capitalist timber production in the Douglas-fir region. But if the crash was in this sense unavoidable, its political expression in the 1990s—"Are you an environmentalist or do you work for a living?"—was not.

My criticisms of the book concern, first, how to extend Prudham's analysis of "ecoregulation" from Douglas-fir forests to other nature–capital interactions; second, the role of the state; and third, how Prudham treats the spotted owl.

Ecoregulation

Prudham makes a strong case for the ecoregulation of capital by Douglasfir at numerous scales. The variability of individual trees creates a bottleneck at the point of disassembly; the differing slopes, soils and degrees of accessibility constrain ambitions for greater economies of scale in

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mills; and the weather hinders rationalization of logging labor. Finally, the long growth period required for trees to reach commercially optimal size and quality deters private investment in reforestation. That capital has had to work around these constraints in various ways is clear. Yet it is hard to discern how the theoretical points regarding ecoregulation should be extended.

Prudham situates forestry somewhere in between crop agriculture, on the one hand, and factory-based industry on the other. The trees are like crops that mature very slowly, and the mills are like factories that happen to have to work with non-standardized and extensively distributed inputs. I simplify, but Prudham does not specify how these two poles—crops and widgets, so to speak-relate analytically through trees. One can say they reflect different degrees of fictitious commodification, but in what do those degrees consist? Are there not also some differences in kind involved? This ambiguity is evident when Prudham describes Douglas-fir forestry as "quasi-extractive", meaning that it never really treated the trees as a renewable resource. Prudham is careful to insist that commodity relations are neither given by nature nor fixed over time. He seeks "to explore a kind of codetermination or conjoined materiality between social and ecological production in nature-based commodity manufacture" (p 111). But if all commodity manufacture is ultimately "nature based", how should we analyze this codetermination?

I suggest that Western livestock production is a case of nature-capital interactions that provides a more useful comparison to forestry than either crops or industry. It shares with US forestry a dependence on federal lands; like old-growth forests, perennial grasslands have come under the legal mandate of sustained yield yet eluded control by "scien-tific" management; and as in the Douglas-fir region, the sheer physical extensiveness of rangelands has been a major source of ecoregulation of capital. There are also very strong historical parallels in policy and research, not least due to the common role of the Forest Service in managing and studying the two resources. (There is an important intersection with fire policy as well, although I can't go into that now.)

Because of these similarities, the differences between the two are all the more interesting. First, although grasses are an input that is fictitiously commodified through leases, they are not the commodity produced: they are harvested by livestock, metabolized, and the livestock are harvested and sold as commodities. The animals have been intensively studied and manipulated to rationalize downstream processing; vaccines, supplements, and shipping and handling techniques have been economically rationalized; and the nutritional values of different plants have been carefully studied. Confined feeding and "boxed beef" processing are perhaps analogous to reconstituted wood products in forestry. But livestock foraging behavior remains highly context-specific, and the underlying dynamics of rangeland vegetation are only formally subsumed. As in forestry, economies of scale in ranching require consolidation of very large amounts of land, generally achieved through leases rather than private ownership. At the same time, ranchers, like farmers in Kloppenburg's analysis of corn, are "propertied laborers", shouldering risks that the larger beef industry neither needs nor wants to absorb.

Second, despite being the commodified product, the livestock are analogous not only to the trees but also to the loggers: the animals do the value-producing labor by foraging and reproducing. This labor has been disciplined and rationalized by fencing, breeding, water development and so forth, but as with gyppo contracting in forestry, capital remains dependent on the experiential knowledge and non-traded interdependencies of its labor force.

Third, revegetation of perennial grasslands has been even more elusive than reproduction of old growth. Where it has happened it has been due principally to natural processes, at most aided by management decisions. In place of the very long temporal scale of reforestation, there is outright temporal uncertainty about replacing lost range grasses: it depends on unpredictable climate patterns, variable and poorly understood degrees of degradation, and seemingly intractable problems in scaling up from greenhouse studies and small plots to entire landscapes. If individual grass plants had the potential to become as valuable as Douglas-fir trees, perhaps "regrassification" crews would exist—but even transplanting seedlings from greenhouses has been unreliable.

The State

The role of the state in the historical geography of Douglas-fir timbering is pervasive and significant, but Prudham does not specify it theoretically and there are several empirical issues that he seems to neglect. We learn that federal attempts to regulate logging on private lands failed, and that regulations were passed at the state level-although the effects aren't discussed in any detail. Later, when private stocks of old growth declined, the federal government embraced maximum sustained yield (MSY) and opened its lands to logging. I would like to know more about the historical and political details of this shift: was it the result of industry lobbying? Were the "scientific" ideas of MSY simply borrowed from European forestry to legitimate a decision that was fundamentally about political economy? Prudham tells us that industry consolidation increased after the advent of federal timber sales—was this link direct and causal? Insofar as the Forest Service was simultaneously imposing a regulatory regime and acting to create or sustain a regime of accumulation, forestry presents an intriguing empirical case of the state's roles in nature-capital relations. Here again, the parallels and contrasts with range management warrant further research.

Commodification and Endangered Species

Prudham makes a strong case for the contradictions of commodifying nature in the case of the Douglas-fir tree. Yet he treats the spotted owl entirely differently: as a "symbol of the crisis of nature's commodification" that mobilizes "a social campaign" (178-179). But the owl is not only a symbol-its legal status triggers enormous economic shifts, as Prudham notes, in which the US Fish and Wildlife Service exercises a monopoly property right to the birds and translates that right into claims on how forests are managed and used. The processes by which this occurs are, I would argue, processes of commodification: assertion of property rights, incorporation into circuits of capital (both economic and statist-bureaucratic), and attempts to rationalize its production—in this case its reproduction and distribution. The spotted owl appears to elude scientific control-much like old growth-due to the complexity of the ecosystems of which it is a part, and the Service is itself "ecoregulated" in its efforts to uphold the ESA. Nevertheless, the owl's legal protection rests on its fictitious commodification, which is a key mechanism in the larger transformation in the dominant regime of accumulation in the Western US.

Environmentalists badly need to read this book if they hope to build alliances with rural landowners and the working class. Perhaps the Endangered Species Act is to blame, but environmentalists clearly failed to see the trees for the forest—that is, they failed to see nature in its interactions with capital, preferring to cast the encounter as Manichean and absolute, such that only an absolutist ruling from the least democratic branch of our government could suffice. They thus could not recognize that logging and loggers per se were not the cause of the owl's decline. Nor could they see the industry as anything less than omnipotent in its power to destroy forests, when in many ways the forests have stymied its efforts and eluded its control—by way of contrast, look at what happened to tall-grass prairies in the Midwest.