

**Critique of “Winning the War for the West”  
by Perri Knize  
The Atlantic Monthly, July 1999, pp. 54–62**

by Mike Hudak, author of  
*Western Turf Wars: The Politics of Public Lands Ranching*

The publication of Perri Knize’s pro-ranching article in *The Atlantic Monthly* is an event of enormous significance in the campaign to protect western public lands from the environmental tyranny of the livestock industry. It is the first time I’ve seen a mainstream, non-environmental, mass-media magazine so strongly support the livestock industry, and dismiss and attack those who seek to protect public lands.

Knize’s article is filled with unsupported claims and misleading half-truths. The typical reader of *The Atlantic Monthly* (upper middle class, urban resident) is unlikely to possess the knowledge to see through this haze of deceit, and will likely believe Knize’s assertions at face value.

Even environmentalists, who have not intensively studied the topic of public lands ranching, may lack the specific knowledge to rebut many of Knize’s statements. My critique is intended as a resource for those environmentalists. I hope it serves as the inspiration for many a letter to the editor of *The Atlantic Monthly*. And I hope it encourages people, who have additional knowledge of public lands ranching relevant to the Knize article, to share it with others.

This critique is not meant as a substitute for actually reading Knize’s article. She employs many techniques of rhetoric that I have not felt worthy of analysis. Nevertheless, to fully appreciate the damaging impact of her article, one should be aware of them. Here I have focused on matters of fact for which I have documentation.

Quotes from Knize’s article are preceded by her initials “PK.” My comments follow my initials: “MH” and are printed in green.

**PK:** “The typical public-lands rancher is not a wealthy cattle baron. Though his ranch may be registered as a family corporation, he is barely making a living.” (p. 54)

**MH: Let’s examine the demographics of ranchers and their utilization of forage on BLM and Forest Service land.**

**Forest Service (Regions 1–6): The largest 2,000 permittees (24.4%) utilize 79.0% of the forage (GAO 1993: 19), while the smallest 2,000 permittees utilize 1.3% of the forage. (GAO 1993: 21)**

**On BLM lands there is a similar utilization of resources by large ranchers:**

**The largest 2,000 permittees (10.6%) utilize 66.1% of the forage (GAO 1992: 16), while the smallest 2,000 permittees utilize 0.13% of the forage. (GAO 1992: 18)**

My reading of the data suggests that Knize is correct in saying that the “average” rancher is not a wealthy cattle baron. But it seems that “wealthy cattle barons” control the vast majority of forage on public lands.

A study of the largest twenty permittees (0.1% of total) (Carlson and Horning 1992: 1) on BLM lands in 1992 revealed that they alone controlled 9.3% of the BLM AUMs (Carlson and Horning 1992: i). This report also provides information about the condition of these twenty allotments as a whole:

... BLM data does indicate that 17.2 million acres, or 83%, of the 20.7 million acres of BLM lands where the top twenty permittees run livestock are considered to be in unsatisfactory ecological condition and in need of management attention (category “I” allotments). According to the BLM, Category I allotments are those allotments where management attention is needed to “improve” the allotment because of degraded vegetation conditions and resource conflicts on the allotment. (Carlson and Horning 1992: 2)

Note that a higher percentage (83%) of BLM lands controlled by these twenty largest permittees is in unsatisfactory condition compared to all BLM allotments (58% in unsatisfactory condition). (Carlson and Horning 1992: 2)

**PK:** “His [the public lands rancher] permit fees are not a form of subsidy—he has already paid full market value for the right to graze public lands.” (pp. 54–55)

“In fiscal year 1998 the Bureau of Land Management and the US Forest Service together spent at least \$75 million on the federal grazing program, and took in only about \$20 million in grazing fees. This deficit does not mean, however, that ranchers underpay. Setting aside for the moment the questions of whether ranchers should bear the full cost of the range program and whether taxpayers benefit from it, the fact is that 90% of ranchers with grazing allotments have paid full value for their leases, though the money didn’t go to the federal government.” (pp. 56–57)

**MH:** That’s right, the money didn’t go to the federal government—it went to the seller of the ranch. This is explained in great detail in Stern (1998).

But why should the average taxpayer (i.e. not a public lands rancher, of which there are less than 18,000 (Power 1996: Table 8.2) feel good about this?

The taxpayer subsidy of public lands grazing is probably much greater than Knize’s figures from the Forest Service and BLM indicate. Robert Nelson, a professor of environmental policy at the School of Public Affairs of the University of Maryland, says there are additional hidden costs of the BLM grazing program. “If all BLM costs are assigned to one particular type of output factoring in overhead costs as well, the management costs for livestock grazing are estimated at \$200 million.<sup>1</sup> Yet, government revenues earned from livestock grazing on BLM lands in 1993 yielded less than \$20 million.”<sup>2</sup> (Nelson 1997: 666) In other words, taxpayers are picking up approximately 90% of the cost of grazing livestock on BLM lands, much more than is suggested by Knize.

Maybe we should feel good about this taxpayer subsidy because of all the jobs and income public lands ranching brings to the West. But these contributions turn out to be minuscule. In the eleven Western states public lands ranching provides only 0.06% of the jobs and 0.04% of the income (Power 1996: Table 8.2). Maybe, though, the product public lands ranchers provide is so valuable that the taxpayer subsidy is justified. In fact, though, the beef they produce amounts to only approximately 2% of US production (Committee on Government Operations 1986). Again, viewed in a national perspective only about 2% of the feed consumed by beef cattle is provided by grazing federal land. (US Department of Agriculture, Forest Service et al. 1992)

Taxpayers are even paying way too much for the forage taken off of BLM lands. Again quoting from Nelson (1997: 666): “the total economic value of livestock grazing on BLM land is below \$70 million, about one-third of the administrative cost.”<sup>3</sup>

Unfortunately, I don’t have a comparable analysis for US Forest Service lands. It’s generally assumed though that the Forest Service has higher overhead costs than the BLM, so I’d expect the percentage of taxpayer subsidy to be at least as high.

Knize’s claim that ranchers have “the right to graze public lands” has little, if any, basis in decisions by the courts. As recently as February 23rd 1999 the US Court of Appeals, 10th Circuit, cited the following history of decisions pertaining to public lands ranching in support of its ruling on the appeal of Diamond Bar Cattle Company:

As early as 1906, the Secretary of Agriculture promulgated a regulation requiring that any person seeking to graze stock on national forest land first obtain a permit from the Forest Service. See *United States v. Grimaud*, 220 US 506, 509 (1911). In upholding the Secretary’s authority to issue this regulation, the Supreme Court iterated that an “implied license” to graze on public lands existed “so long as the government did not cancel its tacit consent.” *Light v. United States*, 220 US 523, 535 (1911). The fact that historically the government may not have objected to use of public lands for grazing was never intended to “confer any vested right on the complainant, nor did it deprive the United States of the power of recalling any implied license under which the land had been used for private purposes.” *Id.*

The “implied license” theory discussed in *Light* was articulated by the Supreme Court as early as 1890, see *Buford v. Houtz*, 133 US 320, 326 (1890), and has since been cited dominantly in cases reaffirming that use of public lands for grazing is not a right but a privilege. See, e.g., *Osborne v. United States*, 145 F.2d 892, 896 (9th Cir. 1944) (“It is safe to say that it has always been the intention and policy of the government to regard the use of its public lands for stock grazing, either under the original tacit consent or, as to national forests, under regulation through the permit system, as a privilege which is withdrawable at any time for any use by the sovereign without the payment of compensation.”); *Healy v. Smith*, 83 P. 583, 587 (Wyo. 1906). In *Omaechevarria v. Idaho*, 246 US 343, 352 (1918), the Court stated unambiguously, “Congress has not conferred upon citizens the right to graze stock upon

the public lands. The government has merely suffered the lands to be so used.” (US Court of Appeals, 10th Circuit 1999)

**PK:** “But when all the costs of private and public forage are compared, it becomes clear that in many cases ranchers pay more for public range than they do for private. On average, according to some economic studies, it is a wash.” (p. 57)

**MH:** On this matter I quote from Stern (1998:46–47):

There is extensive disagreement, however, over the difference between the (average) total costs of grazing on federally leased compared to the (average) total costs of grazing on private leases. Some studies (Barlett et al. 1994; Obermiller 1992; Ros-tvold and Dudley 1993; Torell et al. 1993) conclude that after including the federal fee, the total costs of federal and private leases are comparable, and that some ranchers are paying even higher costs for federal leases. The data for these studies came through extensive surveying of ranchers, who were asked detailed questions about their public and private land operational costs.

Not surprisingly, these studies and their methodologies are disputed by environmentalists and others, partly because the figures used for estimating average costs are often based on surveys of the ranchers themselves, and not on outside accounting methods. Jacobs (1991) also points to evidence gathered in the Committee on Government Operations that show extensive (illegal) subleasing of federal leases at rates approaching private lease rates, and concludes that if there is someone willing to pay a higher price, that allotments’ forage must have that higher value.

Other studies (Gee et al. 1992, 1980; Obermiller and Lambert 1984; Rimbey 1986; USDI and USDA 1977) find that the total costs of federal leases are below those of private leases. Interestingly, well before the requirement that fees be based on fair market value, Gardner reports that, “The ranchers in the survey who had Bureau of Land Management permits reported no cost differences between renting private pastures and BLM district grazing, except for fencing expense” (55). He also finds that not including fees, ranchers with Forest Service permits have higher costs, but these costs are still well below the total cost of private leases.

In summary, Knize is correct that there exist studies showing that public lands permits are comparable in cost to private leases, but she fails to inform the reader that these studies are based on rancher surveys. Studies based on independent accounting methods tend to show that federal permit costs are less than private ones.

**PK:** “George Wuerthner, an ardent and well-known anti-grazing activist, claims, ‘Livestock grazing is the single most ecologically damaging activity we engage in.’” (p. 57)

“... environmentalists would have us believe that cattle grazing is an ecological evil on a par with clear-cut logging and open-pit mining. There is no justification for this claim.” (p. 58)

MH: George Wuerthner is a lot closer to the truth on this point than is Knize. Wilcove et al. (1998) examined various environmental impacts on 1207 plant and animal species federally listed as endangered, threatened, or proposed for listing. Logging impacted 12%; mining (including gas and oil extraction) impacted 11%; livestock grazing impacted 22%. (p. 612) In a way, Knize is correct in saying that livestock grazing as an “ecological evil” is not on a par with logging and mining because it’s actually much worse than either of them.

Wuerthner’s claim might be challenged if one were to consider outdoor recreation, including ORV use, as a “single activity” since according to Wilcove et al. (1998: 612) this impacts 27% of the species.

One should consider though that there are other measures of the environmental costs of livestock grazing than impacts on species at the brink of extinction. Quoting from Fleischner (1994: 636):

By virtually any measure, livestock grazing has serious ecological costs in western North America. Grazing has reduced the density and biomass of many plant and animal species, reduced biodiversity, aided the spread of exotic species, interrupted ecological succession, impeded the cycling of the most important limiting nutrient (nitrogen), changed habitat structure, disturbed community organization, and has been the most severe impact on one of the biologically richest habitats in the region. While undoubtedly there are exceptions to this theme of destruction, clearly much of the ecological integrity of a variety of North American habitats is at risk from this land management practice.

In addition to grazing per se, the industry of livestock production entails a number of indirect costs to native biodiversity. Livestock compete with native herbivores for forage (“usurpation”) and often consume the most nutritive species (“highgrading”). Fencing, which is a fundamental livestock management tool, creates obstacles for many native wildlife species, such as the pronghorn (*Antilocapra americana*). The livestock industry has played a large role in the elimination of native predators; some of the most vehement opposition to predator reintroduction continues to come from livestock interests. Exotic species, such as crested wheatgrass (*Agropyron cristatum*), are planted as “range improvements.” In addition, livestock can transmit disease to native animals (Mackie 1978; Longhurst et al. 1983; Menke and Bradford 1992).

It is also important to note that

Livestock grazing is the most widespread influence on native ecosystems of western North America (Wagner 1978; Crumpacker 1984). Grazing by livestock, primarily cattle, is nearly ubiquitous throughout this region. Approximately 70% of the 11 western states of the United States (Montana, Wyoming, Colorado, New Mexico, and westward) is grazed by livestock (Council for Agricultural Science and Technology 1974; Crumpacker 1984), including a broad diversity of ecosystem types and virtually all types of land management designations. Grazing occurs in creosote bush deserts, blackbrush deserts, slickrock mesas, sagebrush flats, pinyon-juniper woodlands, chaparral, ponderosa pine forests, and alpine meadow above timberline. (Fleischner 1994: 630)

**PK:** “In 1990 the Bureau of Land Management reported that the public range was in the best condition yet this century, and improving.”

**MH:** This assertion is not supported by a subsequent GAO (1991) study:

We could not confirm BLM’s conclusion that the public rangeland is in better condition than ever before in this century because the historic studies BLM relied upon were prepared using different methodologies in some cases and in other instances did not contain supporting documentation. Thus, their results are not comparable.

In support of its conclusion that rangeland conditions were improving, BLM’s report presented data on range conditions collected at various points in time since 1936. As arrayed by BLM, these data ... show that since 1936 the percentage of the rangeland judged to be in good to excellent condition has doubled, from about 16 percent to 33 percent, while the percent classified as poor has been cut by more than half, from about 36 percent to 16 percent.

We attempted to assess the validity of the percentages BLM presented by examining its source documentation as well as data collection methodologies. We found little supporting documentation behind the earlier percentages. For example, the 1936 data ... came from a US Department of Agriculture report that categorized rangeland conditions but did not describe the basis on which the numbers were prepared. In addition, BLM’s 1966 rangeland condition data appear to be based on a one-page summary table presenting rangeland conditions without any further explanation or back-up documentation.

We also found that the data presented were not always comparable between years because different methodologies were used in their collection and compilation. For example, the 1975 rangeland condition data BLM reported were not comparable with the data reported for 1984 and 1989 because BLM changed its collection and reporting methodology. While all the data came from annual rangeland status reports prepared by BLM state officials, the 1975 percentages represented rangeland status in relation to ideal livestock grazing conditions, while the 1984 and 1989

percentages were based on rangeland conditions in relation to potential natural vegetation. Regarding the data BLM reported for 1936 and 1966, we were unable to determine the methodologies employed in collecting the data because there was no methodology description contained in the supporting documentation we reviewed.

...

To further support its conclusion that the public rangeland is improving, BLM cites in its report a study by a rangeland expert that also concludes that the rangeland is in better condition than ever before in this century. While the study citation is accurate, the author also noted that his conclusion was his professional opinion and could not be well documented with specific surveys and reports. Furthermore, the author was not optimistic about future rangeland trends. He stated that the upward trend was in danger of being reversed by a natural drought, along with insufficient federal funds and personnel to manage the public rangeland. (GAO 1991: 4-6)

**PK:** “Aggressive restoration programs are now in place, using methods such as installing water tanks to divert cattle from streams, selective exclosure fencing to keep cattle off stream banks, and rotational grazing systems that change the time and the duration of grazing. The GAO has found these efforts to be very successful, calling the improvements ‘dramatic.’”

**MH:** Knize is probably referring to GAO (1988) which profiled twenty-two riparian restoration projects. What Knize says is true, but what she fails to tell us from the report is also of considerable interest. For example:

Successes have been achieved but much remains to be done. Thousands of miles of riparian areas remain in degraded condition and in need of attention. At the current pace, it will probably take several decades, and in some places even longer, before most riparian areas are restored to good condition.

Moreover, we are not optimistic about speeding up the current slow progress. We expect that the pace of restoring riparian areas will likely remain very slow for two main reasons. The first problem is one of resources: cutbacks in the biologist, soil scientist, hydrologist, and conservationist positions that are essential to developing site-specific restoration strategies. As remaining staffs are stretched thinner and thinner, it is difficult to expect much improvement. It may be difficult enough to sustain the slow progress that has been made to date.

The second problem is one of will. Many staff, largely but not exclusively in BLM, believe that agency management does not support them when actions to improve management of riparian areas are opposed by permittees. The perception that top agency management is not serious about implementing riparian improvement policies is a barrier that can inhibit or discourage field staff from taking the actions essential to restoring riparian areas.

Until BLM and the Forest Service are willing to make adequate staff resources available and then support their staff when tough decisions have to be made, the future of riparian improvement will not be bright. (GAO 1988: 52)

Also not stated in Knize's article is the cost of these projects, and whether those costs are justified by economic return. For the most part, economic return is also not addressed in the GAO report. One project in the study, restoration of Bear Creek (OR), reportedly cost the government approximately \$100,000 for juniper cutting and fencing while returning less than \$400 annually to the government from grazing fees. (Winegar 1997)

**PK:** "When we see degraded rangeland today, for the most part we are seeing the sins of ranchers' grandfathers and great-grandfathers. Today's progressive ranchers have no plans to return to those methods; they have found that ecosystem management is ultimately more economical, producing healthier cattle and better forage." (p. 58)

**MH:** Knize then goes on to tell us a little about the "progressive ranchers." They are like the ones who participate in so-called "Six-Six Groups": groups of ranchers and environmentalists who work "... together to adopt environmental-restoration goals and implement practical solutions." (Knize 1999: 61) Knize never says specifically how these ecologically-minded ranchers are managing their livestock, but she does mention that Dan Dagget participated in a Six-Six Group and then wrote a book, *Beyond the Rangeland Conflict*, in which "... he tells the stories of ten ranches where livestock grazing is compatible with healthy range and wildlife habitat." (Knize 1999: 62)

From Dagget's book we get an idea of the management style used by these ranchers: variations of Holistic Resource Management (HRM) developed by Alan Savory. Dagget provides the following information:

While Savory's Holistic Resource Management (HRM) model remains extremely controversial among ranchers as well as environmentalists, a growing number of ranchers use it, or their own adaptation of it, to chart a course in managing their lands. Others have developed their own management systems based on the principles of HRM: that time is more important than numbers with regard to the effect grazing animals can have on the land; that excluding all types of disturbance from grasslands (grazing, fire, trampling) can actually have a detrimental effect upon them; and that grazing animals can be used as a tool to improve the land, especially if they're herded into dense concentrations that mimic the effects of herds of wild grazers. (Dagget 1995:19)

Years earlier, Alan Savory wrote a book (Savory 1988) in which he laid out the theory and practice of HRM. Subsequently, several environmental scientists have tested his management hypotheses. Before commenting on details of Dagget's book, I want to share some of their scientific findings.

**Bartolome (1989):** In a review of Savory's book *Holistic Resource Management* Bartolome concluded

As the major evidence supporting his ideas, Savory writes in glowing terms about his successes in Africa. Others, like American range scientist Jon Skovlin, who revisited those lands in the mid-1980s, claim to have found little evidence supporting Savory's claims for beneficial effects and sustainable higher productivity and much evidence to the contrary. So far, Savory's claims have not been supported by independent tests in the southwestern United States.

Those who apply Savory's approach do so at their peril. What is especially disturbing is that these methods, sold to an audience short of scientific knowledge and frustrated by conventional management options, are becoming popular with federal range managers. Modern range science is not perfect, but rangeland deserves better than to be subjected to a management experiment, this one holistic, without better justification. Although he sincerely intends to help the livestock producer, because so many of his facts are wrong Savory will help the burgeoning antigrazing movement in the long run. (pp. 591–92)

**Brown (1994a):** After studying the effects of applying HRM for the past couple decades on ranches in Africa, Brown concluded

... at least some of Savory's range management practices could be made to work—but only where summer rainfall is adequate and the principle goal is to produce grass. It also helps to have a steady supply of cheap labor. Contrary to Savory's contention that what was good for sheep and cows was good for wildlife, none of the farms I visited in Africa was particularly rich in non-domestic animals. A few small antelope such as springbok were present on Hobson's farm and at Hillside; the tracks of rheebock were seen at Compassberg. The big herds, so essential for the "excited hoof action" touted by Savory, were absent, as were the large predators. When South Africans go to game farming, as many do, they take the livestock off. (pp. 31–32)

**Brown (1994b):** Surveying a highly touted HRM "success story" (the Whitehorse Ranch in Oregon) Brown observed:

It is obvious that riparian vegetation does not "need to be grazed," as Savory claims. And there is still too much rabbit brush and other indicators of past overgrazing in evidence for my taste. I would also like to have seen a good many more antelope. And while I would have to give the Trout Creek Mountain Working Group high marks, the public costs in additional fencing are high and the sacrifice made by the rancher is obvious. Not many family ranches could afford to remove so many cows and lease other pastures for so long a time as the owners of the Whitehorse. (p. 23)

Bryant et al. (1989): The experiments of these authors refute several claims made for HRM (in the form of short-duration grazing) as compared to continuous grazing management. Specifically, they found that short-duration grazing did not improve the diet quality of grazing animals and that it caused a decline in individual animal performance.

They refute the claim that short-duration grazing increases livestock production. Specifically, that “The level of economic input and management intensity required to establish and operate a short-duration grazing system is excessive, except to increase the ease or flexibility of livestock handling. The return did not justify the expense.” (p. 296)

They refute the claim that short-duration grazing increases forage production. Specifically, “Short-duration grazing did not improve range condition at the same or higher stocking rates ...” (p. 296) And furthermore, that “Short-duration grazing did not increase grass or forb standing crop.” (p. 296)

Finally, they refute the claim that “herd effect” improves seedling establishment. Specifically, “Short-duration grazing produced no positive influence on germination or establishment of seeded or native plants, but it did result in soil compaction.” (p. 296)

Pieper and Heitschmidt (1988): These authors confront the fundamental claims made by Alan Savory for short-duration grazing. They being

... that dramatic improvements in range condition would occur following proper implementation of a short-duration grazing system ... and ... that both rate of improvement and individual animal performance would be enhanced as stocking rate increased. (p. 134)

Pieper and Heitschmidt note that these claims were based on an untested hypothesis by Savory, namely

“... that physical animal impact is not detrimental to deteriorating arid ranges but is, in fact, desirable to hasten the advance of plant succession. This is achieved largely through hoof action, which improves water penetration by breaking up hard surface capping and algae, lichen and moss communities, and allows for greater grass seedling success.” (Savory and Parsons 1980) (as quoted in Pieper and Heitschmidt 1988: 134–35)

Pieper and Heitschmidt further note that since the time of Savory’s claims and hypothesis

... a considerable number of scientific studies have been completed that specifically address the effects of short-duration grazing on above-ground forage dynamics,

hydrologic integrity, and livestock performance. ... In general, these studies do not support the claims that prompted the research. (p. 135)

For example,

... short-duration grazing, in a cell-fencing design, increases the number and density of cattle trails, which increases the amount of bare ground sacrifice area. In other words, there is little reason to believe that the effects of trampling on short-duration-grazed rangeland are much different than the effects of any other grazing scheme. (p. 135)

Regarding hydrological impacts Pieper and Heitschmidt state:

The literature is consistent in describing grazing impacts on hydrological behavior of surface soil profiles. Based on this evidence, it is extremely doubtful that any grazing scheme will improve a local hydrologic circumstance over that found under ungrazed conditions. (p. 135)

And as for Savory's claim that the breaking up of algal (a.k.a. "cryptogamic" or "microbiotic") crusts by hoof action has an overall beneficial effect, Pieper and Heitschmidt cite J. R. Johansen who wrote:

It is very important in this author's opinion that ranchers and range managers be aware of the benefits of soil cryptogamic crusts and the dangers involved with their destruction. Even if increased vascular plant cover could be achieved through the disruption of these crusts, the potential increase in soil erosion could lead more quickly to range deterioration and desertification than if the crusts were left intact. (Johansen 1986) (as quoted in Pieper and Heitschmidt 1988: 135)

Skovlin (1987): Skovlin, a range consultant, visited ranches in Africa where the Savory Grazing Method (SGM) (the former name of what is now called Holistic Resource Management) had been applied for up to fourteen years. Reporting on his findings, Skovlin states:

Claims for range improvement in southern Africa through Intensive Short Duration Grazing at double conventional stocking rates are not founded in fact. To the contrary, evidence in literature from Zimbabwe and elsewhere indicates it is impossible to have both heavy stocking and improvement in range conditions. ... In Southern Africa, where SGM had its beginnings, many ranchers are disillusioned and most rangeland specialists contend there are too many shortcomings to recommend it as prescribed. (p. 166)

Bottom line: Holistic Resource Management, the basis of “ecologically beneficial ranching” touted by Dan Dagget and hence implicitly promoted by Knize, has not lived up to its claims under scientific scrutiny. The few instances where it has resulted in some environmental improvement have cost a lot of money, not something the “average” public lands rancher has, even according to Knize (1999: 54): “The typical public-lands rancher is not a wealthy cattle baron. Though his ranch may be registered as a family corporation, he is barely making a living.”

So, the expectation Knize creates in the reader of her article—that these “ecologically beneficial” livestock management techniques will be replicated throughout the West—is unrealistic simply for economic reasons. In many places though they won’t work, regardless of expenditures, because the environment is unsuitable—typically too arid, although there may be other environmental limitations as well. It’s not clear, for instance, how HRM would be applied to cattle grazing in upland conifer forests in a way that would avoid harm to the environment. (Belsky and Blumenthal 1997)

This brings us to Dan Dagget’s book *Beyond the Rangeland Conflict*. Perhaps the scientific studies mentioned above lacked something essential to making HRM work—perhaps the ranchers profiled by Dagget were more successful.

Tom Fleischner, a professor in the environmental studies department at Prescott College (AZ), reviewed Dagget’s book for the *Journal of Wildlife Management*. Here are a few choice quotes:

There are numerous instances of scientific, management, and even geographic inaccuracy [in Dagget’s book]. ... In one case, a photo caption [Dagget 1995:46] touts a saguaro cactus that is “returning” to a Sonoran Desert ranch because of dramatic improvement in management during the past two decades. If true, this would be the fastest growing saguaro on record. Saguaro growth rates would yield an estimate of the age of the featured cactus at roughly three-quarters of a century. In other words, this cactus didn’t return due to wise management; it was simply lucky enough to escape the dozer blade in the first place. Such basic natural history errors undermine the reader’s confidence. ...

A favorite theme in the book is that the profiled ranchers are creatively using cattle to mimic the natural role of bison (or even Pleistocene megafauna) in grassland ecosystems. There are several problems with this proposal. First, bison had a much more limited distribution than cattle currently do (Fleischner 1994; true even if one grants that “the process of redrawing the map of bison distribution across the West” he alludes to turns out to be accurate). Second, all the talk of grazer-grassland coevolution is essentially irrelevant on the vast majority of Western lands; most “rangelands” are not grasslands, but forests, deserts, chaparral, and a variety of other ecosystem types. Third, even if we disregard the above two items, comparative behavioral studies show huge differences in habitat selection, feeding behavior, and impact between cattle and bison (Van Vuren 1982). ...

With maddening consistency, Dagget refuses to clearly state what his criteria of successful stewardship are; instead, we keep reading platitudes like “health” and “vitality” of ecosystems—terms that are open to opposite interpretations. Ultimately, this vagueness is the book’s greatest undoing. On the very first page he states: “I tell you this not because I’ve read it in a book or a government report but because I’ve seen it.” But he never does tell us what he has seen, that we might judge for ourselves. Thus, we are left to read between the lines and guess what he thinks makes a healthy ecosystem. Based on frequency of mention, I would guess that he equates “greener and thicker grass” (any grass!) with ecosystem health. If so, this is a remarkably shallow definition, and is certainly one that bears close scrutiny. ...

What do we make of the fact that most of the profiled ranch operations are underwritten by inherited wealth, or external funding? (Fleischner 1997: 582–83)

As in the other studies, the ranchers profiled as “environmentally sensitive” are not “average” in the economic sense meant by Knize. These are people of wealth. Indeed the one ranch included in Dagget’s book that was not so well endowed (the Tipton Ranch), went out of business in 1996 due to economic failure.

**PK:** “Efforts to remove all cattle from wildlife areas have proved in some instances to be misguided. Managers at the Hart Mountain National Antelope Refuge, in Oregon, are perplexed by a drop in antelope numbers only seven years after livestock were banished from the refuge so that the land could ‘recover.’ The managers theorize that the problem is a rising number of coyotes, which prey on antelope fawns. But local ranchers say that the managers have it wrong: numbers are dropping because pronghorn antelope depend on cattle to clear away older grasses and make available younger, more palatable shoots.” (p. 60)

**MH:** A letter written by Joy Belsky, PhD, Staff Ecologist for the Oregon Natural Desert Association, to the Director of the US Fish and Wildlife Service puts the matter of the pronghorn population at Hart Mountain Refuge into a larger context:

There has been no predator control on Hart Mountain Refuge since the early 1970’s. Since that time, pronghorn numbers have increased four-fold. Interestingly, but not surprising to wildlife biologists, during the period of predator control (1955–1970) the total pronghorn population did not increase. In fact, research discussed in the *Hart Mountain Plan* suggests that pronghorn and other wildlife populations in the Great Basin are little affected by predation (*Hart Mountain Plan*, Vol. I, p. 143–44, Vol. II, Appendix O, p. 145). ...

Sadly, Hart Mountain Refuge data has been fraudulently used to support predator control. The manager at Hart Mountain Refuge has time and again misled the public by stating that the refuge’s pronghorn population had “suffered a 30% reduction since 1990.” The pronghorn survey data presented in the *Hart Mountain Plan*

and in subsequent updates show that the refuge's pronghorn population has grown by 400% since the early 1970s. If the Hart Mountain refuge manager had chosen 1988 or 1989 as the starting point, he would have reported that the pronghorn population had increased in the last ten years. By presenting only a limited subset of the population data (1990–1997) rather than the entire data set (1955–1997), the Service has repeatedly misrepresented the data and misinformed the public. There is not a qualified scientist in the country who would approve of the Fish and Wildlife Service's interpretation of this data.

The peak in pronghorn numbers ... in 1990 ... represents only one point of a naturally fluctuating population. Far from being the norm, several Ph.D. wildlife ecologists with extensive knowledge of the Hart Mountain ecosystem suggest that the pronghorn population on the refuge may have "overshot" its carrying capacity in 1990 and is now fluctuating around a new average. For the Fish and Wildlife Service to imply that the 1990 data point is the average from which the pronghorn population has since dropped 30% can only be described as dishonest. The refuge would not have had to cancel their last two proposed predator control programs if the scientific evidence had shown that the pronghorn herd were actually at risk.

In conclusion, we are requesting that the Fish and Wildlife Service comply with its hard-fought ecosystem management plan of 1994 and base future changes on the best available science, not on politically based misrepresentation of selected data. (Belsky 1998)

What should we make of Knize's suggestion that pronghorn need cattle to thrive? Not much. Looks like she took advantage of a complex political situation: refuge managers want to increase the pronghorn population by killing coyotes, probably to please hunters. And ranchers (angry that cattle have been removed from the refuge) attack the refuge managers by making the unsubstantiated claim that pronghorn need cows to thrive.

**PK:** "In June of last year a MacArthur grant was awarded to William McDonald, a rancher and a director of the nonprofit Malpai Borderlands Group, at the juncture of Mexico, New Mexico, and Arizona. The group's mission statement declares a commitment to restoring and maintaining 'the natural processes that create and protect a healthy, unfragmented landscape to support a diverse, flourishing community of human, plant, and animal life in our Borderlands Region.'" (p. 62)

**MH:** George Wuerthner, who Knize interviewed, recently wrote a lengthy letter to *The Atlantic Monthly* pointing out likely biases in her article. I say "likely biases" because George hadn't seen the article at the time he wrote his letter. He had only his experiences speaking with Knize. George shared his letter with me and a few other people and I will provide a few quotes pertaining to the Malpai Borderlands Group:

I know the article mentions the Malpai Borderlands project as an example of how ranchers are managing the land for biodiversity and land protection. There is no doubt from my conversations with others and my own observations of the area, that in some cases, the ranchers involved in this program have improved their operations. Nevertheless, one has to put this into perspective. Improvement isn't the same as the best condition. There are still problems with the Malpai cattle that I could enumerate if you are interested.

Secondly, and perhaps more importantly, Drum Hadley, heir to the Anheuser Bush beer fortune, along with the Nature Conservancy, are underwriting much of the expense and innovation needed to bring about these changes in cattle operations. In other words, it's questionable whether the Malpai Borderlands example can be replicated elsewhere. That is why the Malpai Borderlands is used as one of the only examples of "ecologically friendly" livestock operations in the West. You have to ask why all the articles that mention how ranching is compatible with ecosystem preservation always use the same few examples such as the Malpai Borderlands.

The reason is simple—it costs a lot of money and few ranchers are willing, much less able, to afford the expense. It is dishonest to generalize from these few examples and suggest that it's a "solution" to livestock impacts across the West. It's like some car manufacturer spending a lot of money for a special carburetor and lightweight body to design a car that gets 100 mpg, then claiming that cars don't have much impact on air and other environmental parameters. Undoubtedly such cars can be manufactured, but is it something that the average commuter can afford? If not, then it's nothing more than a propaganda show piece—and that's what the Malpai Borderlands is in reality.

Third, the Malpai is often cited as an example of how ranching is preventing subdivisions. Yet of the more than two dozen ranchers affiliated with the project, I am told by a source close to the project that only three ranches—all owned by Drum Hadley or his son—have conservation easements on them forever precluding development. In other words, the rest of the ranchers are keeping their options open. The Malpai may not be "saved" from subdivision at all. What is saving the Malpai area is remoteness. (Wuerthner 1999)

**PK:** "... the Nature Conservancy is also a major player in ecosystem ranching—from the famous Gray Ranch, in New Mexico's bootheel, to Utah's Canyonlands regions, where it recently spent \$4.6 million to save a working ranch from real-estate developers. The Conservancy will continue to run the 5,167 acres of deeded land plus 250,000 acres of public grazing allotments as a model of sustainable ranching. The previous owners of the ranch want to preserve its fragile desert, wildlife, and archaeological sites, including forty-two miles of riparian areas, and will continue to manage it for the Conservancy." (p. 62)

**MH:** As in the case of the Malpai Borderlands, George Wuerthner has first-hand knowledge of the Nature Conservancy's purchase of the Utah ranch:

The author mentions the example of the Nature Conservancy's Dugout Ranch purchase in Utah. TNC claims it "saved" the ranch from developers. I know several of the TNC staff in Salt Lake and I questioned them about this. In truth, there were no other buyers interested in the ranch other than a wealthy Hollywood star. There was no immanent threat of development as implied in either TNC's press release (i.e., it's always saving land from development—it has to say this because that's how it gets people to donate to its coffers) or in recent articles on the purchase. ...

Furthermore, like the Malpai example, TNC is spending more to manage cows here to reduce livestock impacts than the average rancher could afford. Will TNC do a better job than the previous owner—I have no doubt that they will. Yet even in light of this expenditure of funds, TNC cattle operations are still impacting the landscape; not only on the 5,000 or so acres of the ranch, but the more than 200,000 acres of public lands they are still grazing as well. Their cattle are still polluting the streams. Their cows are still compacting soils and trampling cryptogamic lichens and crusts that are critical in the region for preventing soil erosion. The ranch is still dewatering the streams to produce hay to feed cows. The cows are still consuming forage that would otherwise support native herbivores. These are only some of the undisputed ecological impacts of the continued cattle operations—which TNC staff will readily admit to if you question them about it. The problem is that most journalists aren't even equipped with enough knowledge to know what to ask, much less how to evaluate the answers. (Wuerthner 1999)

#### Notes

<sup>1</sup>In 1981, the full costs (including overhead) of managing BLM grazing were \$125 million. See Robert H. Nelson and Gabriel Joseph, Office of Policy Analysis, US Department of Interior, *An Analysis of Revenues and Costs of Public Land Management by the Interior Department in thirteen Western States—Update to 1981* (Sept. 1982). Assuming that grazing continued to represent the same proportion of the BLM budget, and adjusting for the increase in the BLM budget from 1981 to 1992, the estimated 1992 cost of BLM grazing management was \$193 million, or about \$200 million in 1995. See Robert H. Nelson, *How and Why to Transfer BLM Lands to the States*, Competitive Enterprise Institute, (January 1996).

<sup>2</sup>*Bureau of Land Management, US Department of Interior, Public Land Statistics 1993*, 23 (1994).

<sup>3</sup>The government estimate of the market value of federal land grazing is \$6.53 per AUM. See *Bureau of Land Management, US Department Interior, Grazing Fee Review and Evaluation: Update of the 1986 Final Report* 69, 14 (1992).

There are about 10 million AUMs of grazing on BLM land. See *Bureau of Land Management, US Department Interior, Public Land Statistics*, 24–25 (1993).

### References

Barlett, E. Tom, Larry Van Tassell, Neil R. Rimbey, and Allen Torell. 1994. Recommendations from the 1993 Grazing Fee Study. *Rangelands*, 16:52–54.

Bartolome, J. 1989 (November/December). Book Review: Holistic Resource Management by Allan Savory. *Journal of Soil and Water Conservation*, 44:591–92.

Belsky, Joy. 1998 (June). Letter to Jamie Rappaport Clark, Director, US Fish and Wildlife Service, regarding management of the Hart Mountain National Wildlife Refuge.

Belsky, A. Joy and Dana M. Blumenthal. 1997 (April). Effects of Livestock Grazing on Stand Dynamics and Soils in Upland Forests of the Interior West. *Conservation Biology*, 11(2): 315–27.

Brown, David E. 1994a (winter). Out of Africa. *Wilderness*, 24, 26, 27, 30–33.

Brown, David E. 1994b (winter). The Trout Creek Mountain Experience. *Wilderness*, 28–29.

Bryant, F. C., B. E. Dahl, R. D. Pettit, and C. M. Britton. 1989 (July/August). Does Short-Duration Grazing Work in Arid and Semiarid Regions? *Journal of Soil and Water Conservation*, 290–96.

Carlson, Cathy and John Horning. 1992 (September). *Profits at a Big Price: Public Land Ranchers Profit at the Expense of the Range*. National Wildlife Federation Publication # 79950.

Committee on Government Operations. 1986. *Federal Grazing Program: All Is Not Well on the Range*. US Government Printing Office.

Council for Agricultural Science and Technology. 1974. Livestock Grazing on Federal Lands in the 11 Western States. *Journal of Range Management*, 27:174–81.

Crumpacker, D. W. 1984. Regional Riparian Research and a Multi-University Approach to the Special Problem of Livestock Grazing in the Rocky Mountains and Great Plains. Pages 413–22 in R. E. Warner, and K. Hendrix, editors. *California Riparian Systems: Ecology, Conservation and Productive Management*. University of California Press, Berkeley, California.

- Dagget, Dan. 1995. *Beyond the Rangeland Conflict: Toward a West That Works*. Layton, UT: Gibbs Smith, Publisher.
- Fleischner, Thomas L. 1994 (September). Ecological Costs of Livestock Grazing in Western North America. *Conservation Biology*, 8(3): 629–44.
- Fleischner, Thomas L. 1997. Book Review: *Beyond the Rangeland Conflict: Toward a West That Works* by Dan Dagget. *Journal of Wildlife Management*, 61(2): 582–84.
- GAO/RCED-88-105. 1988 (June). *Public Rangelands: Some Riparian Areas Restored but Widespread Improvement Will Be Slow*. US General Accounting Office.
- GAO/RCED-91-191. 1991 (July). *Rangeland Management: Comparison of Rangeland Condition Reports*. US General Accounting Office.
- GAO/RCED-92-213FS. 1992 (June). *Rangeland Management: Profile of the Bureau of Land Management's Grazing Allotments and Permits*. US General Accounting Office.
- GAO/RCED-93-141FS. 1993 (April). *Rangeland Management: Profile of the Forest Service's Grazing Allotments and Permittees*. US General Accounting Office.
- Gardner, B. Delworth. 1962. Transfer Restrictions and Misallocation in Grazing Public Range. *Journal of Farm Economics*, 44:50–64.
- Gee, C. Kerry, Linda A. Joyce, and Albert G. Madsen. 1992. *Factors Affecting the Demand for Grazing Forage in the US*. Technical Report RM-210. Fort Collins, CO: US Department of Agriculture, Forest Service.
- Gee, C. Kerry, J. Bret Keffeler, and Albert G. Madsen. 1980. *How Much is a Colorado Ranch Worth?* Colorado Experiment Station No. 992. Fort Collins, CO: Colorado State University.
- Jacobs, Lynn. 1991. *Waste of the West: Public Lands Ranching*. Tucson, AZ: Lynn Jacobs.
- Johansen, J. R. 1986. Importance of Cryptogamic Soil Crusts to Arid Rangelands: Implications for Short Duration Grazing. Pages 127–136 in James A. Tiedeman, editor, *Short Duration Grazing*. Washington State University, Pullman.
- Knize, Perri. 1999 (July). Winning the War for the West. *The Atlantic Monthly*, 284(1): 54–62.

- Longhurst, W. M., A. L. Lesperance, M. Morse, R. J. Mackie, D. L. Neal, H. Salwasser, D. Swickard, P. T. Tueller, P. J. Urness, and J. D. Yoakum. 1983. Livestock and Wild Ungulates. Pages 42–64 in J. W. Menke, editor. *Proceedings of the Workshop on Livestock and Wildlife-Fisheries Relationships in the Great Basin*. Special Publication 3301. Division of Agricultural Sciences, University of California, Berkeley, California.
- Mackie, R. J. 1987. *Impacts of Livestock Grazing on Wild Ungulates*. Transactions of the North American Wildlife and Natural Resources Conference, 43:462–76)
- Menke, J. and G. E. Bradford. 1992. Rangelands. *Agriculture, Ecosystems and Environment*, 42:141–63.
- Nelson, Robert H. 1997. How to Reform Grazing Policy: Creating Forage Rights on Federal Rangelands. *Fordham Environmental Law Journal*, 8(3): 645–90.
- Obermiller, Frederick W. 1992. *Costs Incurred by Permittees in Grazing Cattle on Public and Private Rangelands and Pastures in Eastern Oregon: 1982 and 1990*. Special Report 903. Corvallis, OR: Oregon State University Extension Service.
- Obermiller, Frederick and David Lambert. 1984. *Costs Incurred by Permittees in Grazing Livestock on Public Lands in Various Western States*. Corvallis, OR: Oregon State University Extension Services.
- Pieper, R. D. and R. K. Heitschmidt. 1988 (March/April). Is Short-Duration Grazing the Answer? *Journal of Soil and Water Conservation*, 43(2): 133–37.
- Power, Thomas Michael. 1996. *Lost Landscapes and Failed Economies: The Search for a Value of Place*. Washington, DC: Island Press.
- Rimbey, Neil R. 1986. *Federal Grazing Fees: The Never-Ending Story*. University of Idaho Cooperative Extension Service Bulletin No. 690.
- Rostvold, Gerhard N. and Thomas J. Dudley. 1993. *A Comparative Analysis of the Economic, Financial and Competitive Conditions of Montana Ranches Using Federal Forage and Montana Ranches Without Federal Grazing Allotments*. Report to Congress and to the Secretaries of the Department of Interior and Agriculture. Culver City, CA: Pepperdine University.
- Savory, Allan. 1988. *Holistic Resource Management*. Washington, DC: Island Press.

- Savory, Allan and S. D. Parsons. 1980. The Savory Grazing Method. *Rangelands*, 2:234–37.
- Skovlin, Jon. 1987 (August). Southern Africa's Experience With Intensive Short Duration Grazing. *Rangelands*, 9(4): 162–67.
- Stern, Bill Steven. 1998. *Permit Value: A Hidden Key to the Public Land Grazing Dispute*. Master's Thesis, U. Montana.
- Torell, L. Allen, Larry Van Tassell, Neil R. Rimbey, and Tom E. Barlett. 1993. *The Value of Public Land Forage and the Implications for Grazing Fee Policy: A Summary of the Bureau of Land Management and US Forest Service. Incentive Based Grazing Fee Study*. Grazing Fee Task Group. Bulletin #767. Las Cruces, NM: New Mexico State University.
- US Court of Appeals, 10th Circuit. 1999 (23 February). *Ruling: Diamond Bar Cattle Company v. US., No. 97-2140*.
- US Department of Agriculture, Forest Service, and Department of the Interior, Bureau of Land Management. 1992. *Grazing Fee Review and Evaluation Update of the 1986 Final Report*. Washington, DC: USDA and USDI.
- US Department of Interior, US Department of Agriculture. 1977. *Study of Fees for Grazing Livestock on Federal Lands*. Washington, DC: Government Printing Office.
- Van Vuren, D. 1982. Comparative Ecology of Bison and Cattle in the Henry Mountains, Utah. Pages 449–57 in L. Nelson, J. M. Peek, and P. D. Dalke, eds. *Proc. Wildlife-Livestock Relationships Symposium*. Univ. Idaho, Moscow.
- Wagner, Frederic H. 1978. Livestock Grazing and the Livestock Industry. Chapter 9 in *Wildlife and America*, Howard P. Brokaw, editor, 121–45.
- Wilcove, David S., David Rothstein, Jason Dubow, Ali Phillips, and Elizabeth Losos. 1998 (August). Quantifying Threats to Imperiled Species in the United States. *BioScience*, 48(8): 607–15.
- Winegar, Harold. 1997. Personal communication.
- Wuerthner, George. 1999 (19 May). Letter to *The Atlantic Monthly*. (Personal communication)