WORKSHOP IN POLITICIAL THEORY
AND POLICY ANALYSIS
513 NORTH PARK
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Grazing of Federal Public Lands: An Overview of the Institutional Landscape

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Presented at the Institutional Analysis and Development Mini-Conference and TransCoop Meeting, Humboldt University/Indiana University, December 13th, 14th, and 16th, 2002, Workshop in Political Theory and Policy Analysis, Indiana University, Bloomington, Indiana, USA

Introduction

Livestock grazing in the western United States has been shown to have great ecological and economic costs (Fleischner 1994; Bryner 1998). Ranching on federal rangelands produces about 2% of the nations livestock and supports about 3% of the nations ranchers (Bryner 1998). Yet this small group accrues an annual national subsidy amounting to more than their total economic production, while degrading the environmental quality and health of the land (Bryner 1998). Although much of the western rangeland is federally owned, the management of it has remained, effectively, in private hands (DeVine and Soden 1997). This de facto private control, combined with a large public subsidy, have led to perverse incentives for land management decisions. Western ranchers have a history of abusing public lands and shirking responsibility for their ecological health (DeVine and Soden 1997; Bryner 1998). They have repeatedly demanded autonomy from the federal government, yet have refused to take administrative responsibility for the land when it has been offered to them (DeVine and Soden 1997). This situation merits serious attention because grazing is a widespread and pervasive land-use on most publicly owned federal lands (Fleishcner 1994).

Livestock grazing is a nearly ubiquitous practice in the eleven western states of Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Idaho, Nevada, Washington, Oregon and California. Approximately 70% of the land area in this region is grazed annually by livestock (Fleischner 1994). Most of this land is federally managed by the Bureau of Land Management (BLM) and US Forest Service (USFS). BLM and USFS land used for grazing amounts to 268 million acres (Fleischner 1994; Bryner 1998; BLM 2002). BLM lands are managed almost exclusively for grazing, accounting for 94% of BLM land use

(Fleischner 1994; Bryner 1998). Many wilderness areas, wildlife refuges and some national parks are also grazed by livestock (Fleischner 1994).

This paper is a beginning; a first attempt at outlining the political landscape of grazing policy on federal lands. The main goal is to begin drawing out levels and realms that may be important for analysis. Another important goal is to start identifying the incentives and rules that have shaped grazing policy in the past and those that may be relevant for future rule building. Has there been a dominant approach? Have there been consistent and identifiable objectives? Has the approach been predominantly top-down, or polycentric? All of these questions may not be answerable at this time. Other questions may arise. What follows is a description of the evolution of grazing policy from the late 19th Century to the present. Following an outline of major policy initiatives by the national government, two examples are given of recent attempts at local self-directed changes in grazing practices. In conclusion, some potential policy alternatives are then discussed that might create incentives fostering local entrepreneurship and governance.

Development of US federal lands grazing policy

Grazing on the federal rangelands of the western US has fostered conflict for over a century (Bryner 1998, Hadley 2001). The initial problem was conflict among ranchers themselves as they fought over the use of rangelands. Because a single ranching operation in the dry western United States requires thousands of acres to be economically feasible, ranchers settled and claimed land adjacent to large tracts of federal "open range" (Bryner 1998). Ranchers adjacent to the same tracts of public land fought over control of the land and attempted to exert dominance through placing more of their livestock on the land as well

as through armed conflict (DeVine and Soden 1997; Bryner 1998). This competition over the use of public land found its way into American folklore as the "range wars."

For many Americans the range wars conjure romantic ideas of rugged individualists, the mythic cowboy and ideas of noble families struggling to make a living from the land. The real products of the range wars were overgrazing and degradation of the environment. The arid to semi-arid environment is also very sensitive to ecological disturbances (Flieschner 1994). Rangelands provide habitat for about 84% of wild mammals and 74% of bird species in the US (Bryner 1998). Much of this habitat is concentrated in the rare riparian areas of the region (Belsky and Blumenthal 1997). Rangelands also serve as watersheds for surface and groundwater resources (Bryner 1998). Grazing in the region has been shown to cause severe soil erosion, water pollution, loss of wildlife habitat and the spread of exotic and invasive plant species (Fleischner 1994; Belsky and Blumenthal 1997; Bryner 1998).

Most ranches in the west need thousands of acres to maintain financially viable herds and rely on federal public land to supplement private holdings (Bryner 1998). In exchange for the use of public lands, ranchers pay a grazing fee on an animal unit month, (AUM) basis, and are responsible for maintaining fences and water resources. Since the days when the open range had just been closed, ranchers have fought grazing fees. Current grazing fees on BLM land are about \$1.35/AUM; that is \$1.35 per cow (and a calf) per month (Robinson 2002). The grazing fee on privately owned rangelands varies from \$4.00 to \$14.00/AUM (Bryner 1998). Despite attempts to legislatively and administratively raise the fee throughout the 1980s and 1990s, a few western senators have managed to keep the fee unchanged since minor adjustments were made in 1978 (Bryner 1998). The difference between what ranchers pay for grazing on public lands and the actual value of their grazing permits has been shown

to come to about \$150 million/year. Considering all the costs of range management, some argue that federal lands grazing amounts to a \$2 billion/year subsidy for about 30,000 ranchers who produce about 2% of the nations cattle (Bryner 1998). This subsidy, not only costs money, it is also an incentive for ranchers to overstock the land with animals.

The American government recognized the degradation of rangeland conditions on federal lands early in the 20th Century and passed the Taylor Grazing Act (TGA) of 1934 to address the problems (Bryner 1998). After the TGA was passed, ranchers ceased fighting each other and began fighting the government to protect their common interests in ranching and preserve their rights to land use. Despite calls for greater autonomy, the states refused offers to take possession of public lands prior to their nationalization under the TGA. Probably realizing the great costs of administering the vast rangelands, no one wanted to assume their stewardship, but still wanted rights to exploit them (DeVine and Soden 1997).

The TGA ended open range grazing and instituted a system of grazing leases. The leases gave individual ranches permission to use particular tracts of land, usually adjacent to private land owned by the ranch (Bryner 1998). The TGA also created the Division of Grazing within the General Land Office. The Division of Grazing worked with the General Land Office to establish grazing districts, set lease fees and develop a permit system under which leases were to be held (Bryner 1998).

The federal government further consolidated grazing policy in 1946 when congress merged the Division of Grazing and the General Land Office to create the BLM within the US Department of the Interior (BLM 2002). In addition to creating the BLM, the Anderson-Mansfield Act authorized the new bureau to make "improvements" (i.e. fencing, wells, ponds, etc.) to public rangelands (Bryner 1998). This trend of consolidation of control by the

federal government had little effect on the environmental impact of grazing. Ranchers maintained de facto control of the land within their leased allotments (Devine and Soden 1997; Bryner 1998). They continued to place more livestock on the range and continued "open grazing" within their allotments; allowing animals to graze on environmentally sensitive areas of the range and at destructive times during the grazing season (Bryner 1998).

With the advent of the environmental movement, the condition of the public rangelands came under ever-closer scrutiny. The 1960 Multiple Use and Sustained Yield Act (MUSYA) mandated that federal lands be managed for diverse uses rather than focusing on a few extractive uses only (Bryner 1998). This effectively meant that the BLM had to begin considering recreation, wildlife and integrity of the natural landscape in its management plans. MUSYA gave the BLM the impossible task of managing the lands for multiple purposes without negatively impacting the productivity of the land for any purpose (DeVine and Soden 1997).

The National Environmental Protection Act of 1969 (NEPA) called for environmental impact studies to be carried out for management plans on all federal lands (Bryner 1998). Environmental impact studies (EIS), mandated by NEPA identified widespread degradation of the rangelands in spite of the continued consolidation of control by the federal government. At this time, land management plans made by state or regional BLM offices were made for whole grazing regions or districts, often bringing millions of acres under one comprehensive plan. In a court case brought by the Natural Resources Defense Council (under NEPA) in 1974, the court found that the BLM must make specific environmental assessments before issuing grazing permits and assess the specific impacts of the permits it issues (Bryner 1998).

In response to the continued degradation of rangeland conditions, Congress passed the Federal Land Policy Management Act (FLPMA) of 1976 (Bryner 1998). FLPMA reaffirmed "multiple use" as a guiding directive for federal lands management and gave BLM new authority to control grazing and manage the lands to improve rangeland health. In 1978 Congress passed the Public Rangelands Improvement Act (PRIA), noting that "vast segments of the public rangelands [were in] an unsatisfactory condition" (DeVine and Soden 1997; Bryner 1998). PRIA re-authorized the TGA of 1934 (with revisions to the 1934 grazing fee formula) and FLPMA. This flurry of new laws throughout the 1970s did little to affect changes in how public rangelands were managed, and environmental degradation continued (Bryner 1998).

The management of the public rangelands is largely in the hands of the ranchers themselves (DeVine and Soden 1997). The General Accounting Office, as late as 1988, noted that "the BLM is not managing the permittees, rather, permittees are managing the BLM" (Bryner 1998). No one in government should have been surprised by this.

Attempting to ameliorate ranchers concerns that local policy would be made in Washington D.C., FLPMA called for the creation of Stockmen's Advisory Boards. These boards, elected by the permittees, were authorized to draft local grazing regulations, supervise the expenditure of federal funds for "improvements," and were given major roles in setting grazing fees, selecting land managers and allocating grazing permits (Bryner 1998). Many BLM officials have actually acted as lobbyists on behalf of the advisory boards. In short, there is little or no monitoring of whether permittees are meeting the conditions specified in their permits and hence, permits have been routinely renewed without review of rangeland health (Bryner 1998). In 1996 the Forest Guardians sued the BLM over the review practices

for renewing permits, alleging that the process violated the Endangered Species Act (ESA), NEPA, and FLMPA. The case was settled out of court in 1998 and the BLM is now preparing EIS and permit reviews when renewing grazing permits (BLM 2002).

Nevertheless, it appears that land managers are still renewing permits as in the past, only filling more paperwork before doing so (Earthjustice 2000; Forest Guardians 2000).

Putting these modern range wars to rest is in the interest of all Americans. There are serious problems with grazing policy on federal lands. The problems are not only environmental, but economic as well (DeVine and Soden 1997; Bryner 1998). (Some degree of the policy problem may actually be due to this distinction between environmental values and economic values, when a potential solution may lie in seeing the two as one.) A large amount of financial resources are expended in grazing related issues in an area that produces a tiny fraction the nations livestock.

A good amount of this expenditure is in administrative costs. Federal land management agencies are continually in court and continually revamping land use policy and regulations. Often these policies and regulations take years to research, develop and implement, only to have them subverted by the most recent court ruling and put back on the drawing board (Bryner 1998). Other problems with grazing policy stem from the market economics of ranching and the environment in which most BLM land is located. On average in the western US, cattle require between 35 to 90 acres of land per animal, per year for forage. In parts of the more humid eastern US, less than one acre can support several cattle per year (Bryner 1998).

In addition to the environmental and financial costs of grazing policy, the mode of conflict resolution through litigation, and bureaucratic and political wrangling is detrimental

to the building of local social capital and the maintenance of civil society. Citizens no longer engage and relate to each other, but sue each other. In some cases they have resorted to threatening each other with violence to persons and property (Benke 1998). Nearly a century of legislation and thirty years of lawsuits have not solved the problems of any parties involved.

Changing political geometry?

The above historical framework describes the political evolution of the western rancher from a purely self-interested individualist to a member of a highly successful political interest group. This group (predominantly ranchers, loggers and miners), formed part of what has been called the "iron triangle" of natural resource policy (DeVine and Soden 1997). The iron triangle of extractive resource users, sympathetic members of Congress and "captured" agencies (BLM, USFS), has overwhelmingly dominated collective choice and operational rule-making on public land resource use until very recently. They have successfully managed to keep the cost of administering the public lands in the hands of the federal taxpayers, while maintaining low-cost access for themselves (DeVine and Soden 1997).

For most of American history, the constituents of western states have been rural, extractive users of natural resources (Riebsame 1996a). As a result, local and state politicians benefited from supporting policies that favored the extractive industries.

Consequently, western congressmen, representing proportionately few Americans, were able to control land use policy on federal public lands (DeVine and Soden 1997; Bryner 1998).

Nevertheless, the iron triangle has been in the midst of a reconfiguration.

The population of the western US has been becoming more urbanized over the course of the past few decades (Riebsame 1996a). Western cities such as Las Vegas, Phoenix and Denver are among the fastest growing in the nation (Baron et al. 2000; Devine and Soden 1997). As the proportion of residents living in cities increases, the proportion having urban and environmental values also increases (Brunson and Steel 1997; DeVine and Soden 1997; Riebsame 1996a). Many new westerners moved to the west for the perceived amenities offered, including clean air and water, recreation and unspoiled natural landscapes (Brunson and Steel 1997; Riebsame 1996a). This demographic shift has given rise to what is termed the New West. The New West's economy is driven mainly by service and technology industries, not ranching, logging or mining (Riebsame 1996a). The New West is also inclined to view the public lands as resources to be protected (Brunson and Steel 1997; Baron et al. 2000). Protected from degradation of wildlife habitat, water quality and aesthetic elements. This differs greatly from the values that the traditional west has placed on the land, setting priorities that emphasize exploiting the land for profit (Devine and Soden 1997; Baron et al 2000).

The recent shift in the demography of the west has changed the dynamics between the elements of the iron triangle (DeVine and Soden 1997). Urban voters are becoming more important than rural. The politically evolving urban population represents several constituent groups, some of which place new demands on the land management agencies as well as the politicians (Baron et al. 2000). Some of the potential constituent groups in western urban centers include environmental preservationists, conservationists, recreationists, and housing, commercial and industrial developers (DeVine and Soden 1997; Riebsame 1996a; Baron et al. 2000). The recent emergence of new interest groups creates a dynamic situation of

shifting political alliances to meet the needs and interests of different groups at different times, depending on the issue at hand. So, with a shift in demography toward a more complex social structure there is also a shift toward a more complex political structure where it is unlikely that one group will dominate as in the case of the traditional iron triangle (DeVine and Soden 1997; Baron et al. 2000).

Despite the shift in the demographic and political landscape, little has changed regarding grazing policy on the federal lands. The reasons for this are unclear, but there seems to be a policy deadlock. Although changes to grazing policy have been proposed in Congress over the past decade, they are killed in one or the other chamber or by the executive branch. A Senate filibuster blocked passage of increased grazing fees, a threatened presidential veto can blocked decreases in the grazing fees (Bryner 1998). Against this national background of impasse there is a small and unclear movement at the collective-choice and operational rule-making levels that may be moving forward on grazing policy. A renewal of democratic governance?

Traditionally, environmental, and more recently urban, interest groups had used the courts to appeal policy decisions and sue agencies for non-enforcement of land use, land management and environmental rules. With growing local support and the realization that threatened court action is a powerful weapon, these groups are becoming more active (DeVine and Soden 1997). They have begun to engage in direct lobbying for policy on collective-choice issues around grazing and land management at local, state and national levels (Devine and Soden 1997). Perhaps more importantly, they are also engaging the extractive users in negotiation at the operational decision making level (Benke 1998; Marston 2001). In some cases these negotiations can be seen as bypassing national policy and

addressing the problem more directly. Whereas the grazing debate at the national level has focused on grazing fee and permitting rules, local groups are engaging in face-to-face communication over day-to-day grazing practices and land use decisions. It has been hypothesized that this type of engagement by the parties has only come about as a result of the breakdown of the iron triangle of natural resource policy (DeVine and Soden 1997). The non-extractive groups are feeling more secure and thus willing to consider foregoing court action in favor of negotiation. The ranchers on the other hand, are feeling less powerful and realize a need to negotiate or face losing ground on their issues.

This interaction and initiative among local parties in spite of national leadership, has given hope to observes of western land use issues. William Riebsame (1996b) has suggested that the New West might be a "crucible for enhanced civil culture and collective land stewardship. Recently, for the sake of building social capital and establishing trust, environmental groups have given up rights to appeal to federal courts, and ranchers have given up private land (Marston 2001). Yet, the long history of conflict and hard-line tactics cause many to be distrustful. Parties have walked away from agreements or acted contrary to promise simply out of fear that the other side might have done so first (Benke 1998; Forrest 2001). Is there true hope for progress on federal land use issues? What should that progress be towards? The ecological and economic costs of grazing in the west seem to be unjustifiable, should ranching be eliminated from federal lands? Or, should ranching and environmental interests compromise and each side accept less than optimal benefits?

More and more western ranchers seem to be realizing that they are engaging in environmentally harmful practices that will only damage the long-term prospects for their ranching endeavors (Forrest 2001; Huggard 2001; MSNBC 2001; Marston 2001). This

realization and the desire to protect their subsidized use of the land, has caused ranchers to begin negotiating and compromising with environmental groups, especially beginning around the mid-1990s (DeVine and Sodden 1997; Marston 2001). Environmentalists and ranchers may have several common interests as a basis for compromise besides the dynamics of power relations. The ecological protections that environmentalists seek will also benefit ranchers by improving the health and productive capacity of the land. There is also a widely held view that having ranchers using the land is better than not. Baron et al. (2000) and Knight et al (1995) have argued that without the subsidized use of federal rangelands, ranchers would be forced to sell off their private holdings and subdivision of the open range would begin. That subdivision of the rangelands into small parcels could possibly hurt the ecology of the range, and perhaps more so than a balanced and sustainable form of cattle grazing (Knight et al. 1995; Baron et al. 2000).

Several groups have formed that work towards the goals of protecting the environment and repairing the health of the land while keeping ranchers on the range. One group, the Catron County Citizens Group was born out of what may have been the most serious conflict over federal land use. The group, in Catron County, New Mexico, was created to help alleviate tension over federal land use issues and the local economy. The Catron County Citizens Group states that its mission "is to serve as a forum to enable people with different views to openly and honestly discuss issues that concern our community and to find common ground in order to take action on projects that ensure an economic, social and environmentally sound future" (Catron County Citizens Group 2002). The goals of the group are stated as to "promote land stewardship and the local economy, and to reduce stress" (Catron County Citizens Group 2002).

The group was created through a grant obtained by University of New Mexico Health Sciences Center (Benke 1998). Tensions in the county rose to a high level when several lawsuits by environmental groups resulted in decreased logging and grazing in many areas of the county. Many businesses in the county closed and the population of Reserve, the only town, shrank by half. The county passed its own land use ordinances for the federal lands and an ordinance for the arrest of any federal officials enforcing federal laws or policies in the County (Benke 1998). They also passed a non-binding resolution that called for all citizens in the county to own a firearm (Benke 1998). The local physician asked for help from dispute resolution groups when he began noticing increases in the number of patients with stress related illness, as well as increases in alcohol, drug use and domestic violence. He also claims to have had citizens coming to his office to have packages x-rayed for bombs (Benke 1998). Once the Citizens Group was established, the residents began learning the process of dispute resolution and the long process of establishing trust. The Group has been working on its mission since 1996 and is currently active in many projects that attempt to allow local citizens to use resources on the public lands while protecting the environmental integrity of the land (Catron County Citizens Group 2002).

Other groups, such as the Quivira Coalition, are less political in nature and more focused on teaching ranchers about an ecosystem approach to land management. The Quivira Coalition works with ranchers who want to find a better way to manage their rangeland allotments. Many ranchers have seen the effects that mismanagement can cause and have begun to worry about the sustainability of their practices (MSNBC 2001; Quivira Coalition 2002). In the past, rancher's answer to low profits was to put more cattle on the range, but some are seeing the long-term problems with this approach. Through ecosystem

based land management, ranchers foster the health of the whole ecosystem, protecting native plant species, wildlife habitat and water quality (Huggard 2001; MSNBC 2001; Quivira Coalition 2002). Some ranchers have seen that through caring for the environment, they can increase the productivity of their land and their profits.

Both of these groups represent a change in how some federal lands users are approaching their use of the land. The focus may be shifting and the constitutional decision making arena may be becoming less important. While groups like the one in Catron County appear to be crafting rules at the collective-choice and operational level, groups focusing on ecosystem management, like Quivira, are offering suggestions to ranchers at the operational level without producing any formal rules. It may be that there is an adequate broad-level national policy in place and what is needed is not further federal legislation, but local entrepreneurship and problem solving. Whether that is the case goes back to fundamental questions that the nation must collectively answer, such as whether grazing should be allowed at all on federal lands, or whether it should be the primary use of public lands, or something in between.

Some policy options

One national policy option that would fit with polycentric solutions to grazing issues, allowing local collective and operational rule making within national policy, is the sale of private grazing rights on public lands. Bryner (1998) discusses this option in terms of an open market where grazing rights could be bought and sold by anyone whether for the purpose of grazing (ranchers) or for taking the land out of use (protectionists). It is suggested that this approach would "condo-ize" the rangelands. Like a condominium community, the forage rights owners would hold title to the forage rights, but be bound to follow federal

environmental laws and pay "association fees" for land administration and maintenance. While this suggestion might possibly eliminate the need for subsidies and leave the potential open for local negotiation over local decision making and day-to-day operational rules, it fails to address what seems to be the fundamental problem of enforcing allocation rules. Although the federal lands are in fact a common pool resource, they are regulated as private goods. As discussed in the first section, allocation rules intended to protect the ecological integrity of the land are largely set and monitored by the ranchers themselves. Most ranchers feel that they should be free to do whatever they wish on their allotment of federal land (DeVine and Soden 1997; Bryner 1998). They feel that they paid for it and it is theirs to use without interference. There is no reason that this should change under the forage rights idea. Forage rights would continue the current model of individual ownership, in which neighboring ranchers have no incentives to be interested in the land management decisions made by their neighbors. Such a policy fails to recognize rangeland as a common pool good rather than a private good.

An option that would be a new direction, eliminating the need for subsidies, and encouraging local entrepreneurship, is the sale or granting of *common* forage rights. By allocating large areas of land for use by several ranches, and stipulating that no areas could be separated for individual use, ranchers would have self-interest in making sure that his neighbor was being a good land steward because each of them would have a stake in the land management practices of the other. The creation of new rules around the model of the rangelands as a common pool good could be a way of shaping new incentives for local communities and groups of ranchers to compromise on land use decisions it in their interest to ensure that others are protecting the resources. This approach would make federal lands

grazing more like a common pool resource than a private good, which is currently how it is treated. Groups like Quivira have experimented with a similar idea, at a small scale, through the use of "grass banks" donated by neighboring ranchers. With grass banks, some ranchers can rest portions of their land by using the grass bank if areas of their land become impaired from over grazing, drought or similar problems. Such a solution would need to carefully craft boundary, allocation and monitoring rules to avoid the problems that were the impetus for the Taylor Grazing Act.

There are several advantages to shifting the resource model to one of a common pool resource. First of all, the physical nature of grazing forage makes it relatively easy to manage and create allocation rules for (Ostrom et al. 2002). The quality and productivity of the land can be assessed and plans for current and future allocations can be made. In addition to this benefit for making allocation rules, several other types of rules have been identified that are associated with successful common pool resource management plans (Agrawal 2002; Ostrom et al. 2002). Boundary rules would have to be established that make sense for each particular region. The western rangelands encompass a vast area and there is much local variation in environmental conditions. Allocation rules have also been identified as important and would also vary from place to place, but as just mentioned, grazing forage offers advantages for crafting allocation rules. Local areas could also craft their own monitoring and sanctioning rules. The BLM and USFS have proven that they cannot be relied upon to impartially enforce regulations. The opportunity to craft monitoring and sanctioning rules at the local level could do much to reduce the amount of resources spent on legislative and court battles over rule enforcement. By implementing a common pool resource model and using these rules as a framework for building local institutions governing federal rangeland, ranchers could do a great deal toward protecting the environment, making a better living and convincing their opponents that banning cattle grazing is not necessary.

Conclusion

There is a long history of conflict over the issue of grazing on public lands, yet surprisingly little has changed over the years. On one hand the lack of change is surprising; environmental damage caused by grazing in the west is well documented; federal lands grazing costs the government far more than the economic output would seem to justify; and the beneficiaries of federal grazing policy are a surprisingly small group. On the other hand, the situation is a good example of what James Q. Wilson described as the politics of regulation (Wilson 1980, in Bryner 1998). Wilson explained how subsidies that accrue to a few individuals are often quite secure because they have a very strong incentive to protect the subsidy while the taxpayers who pay the bulk of the costs see little incentive in trying to end them.

It has been suggested that there is an institutional inertia or path dependency created at the formation of institutions (Knight 1992; Firmin-Sellers 1995). By instituting rules that define future choices and create incentives rules tend to be perpetuated. Even when the rules result in obvious problems at the operational level they can tend to resist change. Firmin-Sellers (1995) suggested that when rules are created based on previous experience than a true rational model, poor policy can be the result. Ranching policy in the west is a clear example of this. From the beginning, the model of the western ranch has been based on the idea of private ownership, leasing parcels of land to individual ranchers. This model worked well in the east, but has failed in west because it did not consider the very different environment of the region. The national policy has also consistently failed to apply the principle of

interdependence, ignoring the potential benefits of linking the payoffs and choices of individual ranchers to each other.

The situation at the local level may be more hopeful however. Most attempts at the national level to address the issue have been top-down approaches. A main weakness with national policy has been the failure to address the incentives that ranchers face and the potential problems with monitoring and enforcement of rules at the local level. As the demographic composition of the west has changed, so have the political dynamics and consequently new models may be developing. As rural, extractive users of the federal lands become more of a minority in their own states, they are becoming more interested in compromises with their traditional foes.

If this is a time for moving forward on this issue, and if the future lies in local entrepreneurship, action at the national level may still be necessary. Although the groups discussed above, and others like them, are addressing environmental concerns and local economics, they do not address the macro-level economic picture; nor does grazing ever become completely benign. Even if the environmental problems are alleviated, the economic problems associated with grazing on federal land do not go away. So, no matter how environmentally sound grazing may become, it still represents a lopsided economic equation, offering little return for a large investment. If ranchers and environmental groups can both see it in their interest to keep ranchers on the land, they may be able to form a political coalition to change national rangeland policy for the better in terms of the environment and economics.

Literature Cited

- Agrawal, Arun. 2002. Chapter 12. Rules, Rule Making, and Rule Breaking: Examining the Fit between Rule Systems and Resource Use. In *Rules, Games & Common pool Resources*. Ostrom, E., Gardner, R. and Walker, J. Ann Arbor. The University of Michigan Press.
- Baron, J.S., Theobald, D.M. and Fagre, D.B. 2000. Management of Land Use Conflicts in the United States Rocky Mountains. *Mountain Research and Development*. 20:24-27.
- Belsky, A.J. and Blumenthal, D.M. 1997. Effects of Livestock Grazing on Stand Dynamics and Soils in Upland Forests of the Interior West. *Conservation Biology*. 11:315 327.
- Benke, Richard. 05/03/1998. Rivals Seek Accord on Environment. Timber: Ranchers, Loggers, Activists and Rangers in New Mexico's Gila National Forest Meet Regularly. Four Years Earlier, Dispute Generated Sabotage. *Los Angeles Times*. www.fguardians.org/news/n980502.html. Accessed 10/29/02.
- Brunson, M. and Steel, B.S. 1997. Sources of Variation in Attitudes and Beliefs About Federal Rangeland Management. In *Public Lands Management in the West: Citizens, Interest Groups, and Values*. Steel, B.S. ed. Westport, CT. Praeger. Bryner. 1998.
- Bryner, G.C. 1998. U.S. Land and Natural Resources Policy: A Public Issues Handbook. Westport, CT. Greenwood Press.
- Bureau of Land Management, US Department of the Interior. 2002. *BLM Facts*. www.blm.gov/nhp/facts/index.htm. Accessed 10/30/02.
- Catron County Citizens Group. 2002. Catron County Citizens Group.

 www.wnmu.edu/Stewardship/ORGANIZATIONSac.htm#CATRON%20COUN
 Y%20CITIZENS%20GROUP. Accessed 10/25/02.
- DeVine, K. and Soden, D.L. 1997. Changing Political Geometry: Public Lands and Natural Resources in Nevada. In *Public Lands Management in the West: Citizens, Interest Groups, and Values.* Steel, B.S. ed. Westport, CT. Praeger.
- Earthjustice. 2000. Suit Alleges Livestock Grazing in National Forests Violates

 Endangered Species Act: Challenges Grazing Practices Across the Southwest.

 www.earthjustice.org/news/display.html?ID=109. Accessed 10/24/02.
- Firmin-Sellers, K. 1995. The Concentration of Authority: Constitutional Creation in the Gold Coast, 1950. *Journal of Theoretical Politics*. 7:201-222.

- Fleischner, T.L. 1994. Ecological Costs of Livestock Grazing in Western North America. *Conservation Biology.* 8:629-644.
- Forest Gaurdians. 02/29/2000. Enviro Groups Challenge New Mexico BLM Grazing Standards: New Standards for Land Health Make Livestock Dominant Use. www.fguardians.org/news/pr000229.html. Accessed 10/25/02.
- Forrest, S.S. 2001. The Vallecitos Federal Sustained-Yield Unit. In *Forests Under Fire*. Huggard, C.J. and Gomez, A.R. eds. Tucson, University of Tucson Press.
- Hadley, D. 2001. Grazing the Southwest Borderlands. In *Forests Under Fire*. Huggard, CJ. and Gomez, A.R. eds. Tucson, University of Tucson Press.
- Huggard, C.J. 2001. Toward a Twenty-First Century Ecosystem Management Strategy. In Forests Under Fire. Huggard, C.J. and Gomez, A.R. eds. Tucson, University of Tucson Press.
- Knight, R.L., Wallace, G.N. and Riebsame, W.E. 1995. Ranching the View: Subdivisions versus Agriculture. *Conservation Biology*. 9:459-461.
- Knight, J. 1992. *Institutions and Social Conflict*. New York. Cambridge University Press.
- Marston, Ed. 2001. Three Days in Estes Park. *Collaborative Leadership in the West Conference*. Resources for Community Collaboration.
- MSNBC. 2001. Coalition Tries "Greener" Ranching: Tensions Have Built Over Cattle and Land Conservation. Rio Grande/Rio Bravo Coalition. www.rioweb.org/Archive/msnbc_ranching080101. html. Accessed 10/25/02.
- Ostrom, E., Gardner, R. and Walker, J. 2002. *Rules, Games & Common pool Resources*. Ann Arbor. The University of Michigan Press.
- Quivira Coalition. 2002. *Quivira Coalition: Intro*. Quivira Coalition. www.quiviracoalition.org. Accessed 10/25/02.
- Riebsame, W.E. 1996a. Ending the Range Wars? Environment. 38:4-29.
- Riebsame, W.E. 1996b. Ending the Range Wars? Reply. Environment. 38:43.
- Robinson, S. 10/24/2001. We All Have a Stake in Not Driving Ranchers off Their Grazing Allotments. *Albuquerque Tribune Online*. www.abqtrib.com/archives/businessOl/111201_business_shercol.shtml. Accessed 10/24/02.

Wilson, J.Q. 1980. *The Politics of Regulation*. New York. Basic Books. In Bryner, G.C. (1998).