Extinction and Democracy

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The generally acknowledged "background" or "natural" rate of extinction is about one species per million per year, or between ten and a hundred extinctions per year. Estimates of the current extinction rate vary, from E.O. Wilson's 27,000 species per year to Paul Ehrlich's 70,000-130,000 per year. We can say with some certainty that we are experiencing a "sixth extinction," a crisis comparable to the one that destroyed the dinosaurs. After major extinction events, species have reached levels of biodiversity comparable to those of the preceding period, but only after a multi-million-year span that renders any such recovery irrelevant to the human scale of democratic politics.

The crisis of the sixth extinction offers profound and unprecedented challenges to democratic theory. Other environmental problems, such as climate change, are collective action problems of a familiar, if difficult, type. By contrast, the case of extinction has several unique implications for democratic theory. First, for fragile species whose medium-term preservation is technically possible, democratic policy flux over time effectively reduces the scope of policy choice to one—extinction. This is the case because the normal policy flux that follows from alternation in power will drive a ratchet effect in which each win for the development side is permanent, while each win for the preservation side is temporary. Second, uncertainty about the value of endangered species, even considered from the point of view of the narrowest market-driven utilitarianism, calls into question the democratic legitimacy of policies allowing potentially essential species to go extinct. Such policies reduce the scope of future democratic decision-making irreversibly. This presents a paradox for democratic theory, since decisions that do not undermine democracy itself should always in principle be available for democratic decisionmaking. Third, beyond questions of democratic scope, the on-the-ground rulemaking processes in the case of species preservation policy exhibit possibly unique rhetorics of collective incapacity that undermine political agency at nearly every stage of decision. Fourth and finally, extinctions, even technically preventable extinctions, present a possible limit case to democratic politics: democratic polities find themselves constitutionally unable to achieve the policies that democratic theory suggests they should consider.

This paper explores some of the theory and background for the larger project on extinction and democracy outlined above. I am currently preparing to conduct a series of case studies of large, multi-player habitat conservation plans in the United States. In an earlier case study of vernal pool preservation in Southern California, I identified a dynamic I called the "ratchet effect" in biodiversity policy. I found that policy for the protection of very fragile species does not simply fluctuate in response to democratic alterations in the political climate. Instead, it moves according to a ratchet-like dynamic: every policy fluctuation either produces a permanent win for development, or a provisional win for conservation. In the vernal pool case, as soon as a policy shift devolved the decision-maker of last resort from the federal level to the local city council, irreversible damage was done to the survival prospects of the fragile species that inhabit near-coastal vernal pools. The policy shift (from the standard Endangered Species Act regime [ESA] to the new habitat conservation plan [HCP] model) was intended to democratize the process through the participation of local stakeholders (a popular recommendation among political theorists these days), as well as to make protection policy more sensitive to scientific expertise. In practice, however, the results subverted both the expressed will of the stakeholders and the considered views of conservation biologists and other experts. By the time environmental, local, and scientific critics won their case in court, no satisfactory remedy was available, because policies to develop extremely fragile habitat cannot be reversed.

Decisions like these are of obvious importance for conservation policy, but here I am particularly interested in the implications of the case of biodiversity policy for the coherence of democratic theory. Pluralist arguments for democratic stability, for example, celebrate the value of policy reversibility. According to pluralists, policy reversibility keeps political losers from withdrawing from the system, since their interests are better served by waiting to compete under more favorable circumstances. Social contract approaches to democracy also rely on policy reversibility, though their argument is different; they say that it violates human rights to have any one group making permanent decisions for other groups without their consent. Taking as a final theoretical example one of the simplest glosses on what democracy means—having a say in the policies that affect you—we can see that even here, democratic fluctuations in policies for the preservation of fragile species have an ironically undemocratic effect.

Unless mitigation science removes the threat of extinction for fragile species (and it would be foolish to bet on such an uncertain prospect) the ratchet effect will continue to be part of every democratic system's preservation efforts. However, a more resilient political-

institutional structure should be able to slow the drive to extinction. The relevant distinction is not between policy flux and no policy flux (between democratic and non-democratic options), but between opportunities for flux than enhance democratic accountability, transparency, and inclusiveness, and those that subvert those values. I emphasize in the last section of the paper that the case of devolution in HCP planning does *not* involve a choice between environmental values such as species conservation and democratic values such as local participation. In actual practice, the shift to HCPs illustrates a trade-off of one democratic value (accountability) for another (participation). As I documented in my earlier study of vernal pools (see page 9), corrupt practices--of secrecy, shifting standards, lack of scientific information, a persistent rhetoric of resigned lamentation for what was in fact not yet lost, and using the public process like a toreador's cape to distract public attention--all contributed to a lack of accountability. Though these democratic shortcomings are disturbing, they actually enable a tempered optimism regarding the democratic prospects for extinction prevention, since they show that the process that brought the vernal pool species so much closer to extinction need not be viewed as the inevitable result of the ratchet effect.

Section 1: The Ratchet Effect

Let us presume that an "essential feature of democracy is that nothing is decided definitively" (Przeworski 1999). On this understanding of politics, everything is always at least potentially on the political table, since anything removed in theory reduces the scope of actual democratic decision. Deliberative democratic theorists and observers of new devolutionary elements of American species protection policy both support the opening up the decision-making process to stakeholders by broadening democratic deliberation to include not only low-level decisions but regular popular evaluation of issue agenda.[1] The advantages of democratic policy reversibility are admirably summarized by political scientist Nicholas R. Miller: a "pluralist political system does *not* authoritatively allocate values in a stable fashion. Rather, it sets political competitors—who might otherwise be bashing heads instead of (repeatedly) counting them (and seemingly getting different counts every time)—running around…. Not only does each competitor 'win some and lose some', but most wins and losses are themselves reversible. Thus the competitors can never be confident of their

[1] Karpowitz and Mansbridge call this deliberative process "dynamic updating" (2005, 246). For representative commentary on the participatory effects of habitat conservation plans, see the many contributions to the two-volume work, *The Endangered Species Act at Thirty*, Goble, Scott, and Davis, eds. (Washington: Island Press, 2006).

victories, nor need they resign themselves to their defeats. Of course, since considerable resources are devoted to this competitive treadmill, pluralist politics are somewhat inefficient in economic terms. But the state of affairs associated with severe political instability is far more profoundly inefficient" (Miller 1983).

There seems to be consensus on the necessity of policy reversibility for democracy. Moreover—at least on the level of ordinary policy-making if not at the constitutional level—recent democratic theory expects the two values to vary together: a better democracy allows more opportunities for more stakeholders to have a say in the policies that affect them. In fact, as I discuss in the second half of the paper, scholars of politics have presumed that devolution of decision-making authority from the center to the local level nearly always enhances democracy. At first blush, this view seems almost too obvious to belabor; the principle of affected interest should of course guide reform in the direction of more rather than less democracy.

It is my claim that this feature of democracy—this requirement of policy reversibility—sometimes leads paradoxically to irreversible, institutionally predetermined outcomes. The fundamentals of democratic decision-making guarantee at least some rotation in office and some opportunity for reversals of the status quo (and the opportunity to reverse the status quo at least in part is essential to democratic self-governance). For certain kinds of policies, however, democratic policy flux can move, over the long run, in only a single direction. Thus for these kinds of policies, the long-run outcome of democratic decision-making is only distantly and somewhat arbitrarily related to the contents of popular will. The ironically antidemocratic effects of the ratchet effect in the case of HCPs are being even more ironically accelerated by the trend toward devolution of policy authority, as we shall see toward the end of this paper.

Take an admittedly extreme case of species protection policy: a policy for the preservation of some fragile species occupying valuable land under consideration for development.[2] (Although there is still a great deal of uncertainty among conservation biologists regarding the concrete effects of various policy instruments for protecting

[2] I distinguish between species that are fragile—that is, whose survival is threatened by human activity—and those that are less fragile and more compatible with human activity. Of course some species thrive under the conditions industrial humanity has created (coyotes, deer, rats, mosquitoes, some viruses, and so forth). And of course species extinction and speciation are natural processes. For the purposes of political theory, however, the time scale on which speciation and natural extinctions operate render them irrelevant; human-generated extinctions are my object of inquiry here. As Donald Lewin puts it, "Although extinction of various species is a natural phenomenon, the rate of extinction occurring in today's world is exceptional—as many as 100 to 1,000 times greater than normal." Quoted in "Extinction Rate Across the Globe Reaches Historical Proportions," *Science News*, January 12, 2002.

endangered species, there is consensus that the species most likely to recover are those threatened by something other than habitat loss [Scott et al. 2006, 29].) In vernal pool preservation in Southern California, for example, policy does not merely fluctuate in response to democratic alterations in the political climate. Instead, it moves according to a ratchet-like dynamic that could apply to species conservation in any democratic context: every policy fluctuation either produces a permanent win for development, or a provisional win for conservation. Confronted with a yet another threat to the few remaining vernal pools in the region, San Diego State University biologist Ellen Bauder said: "It cannot be mitigated. Period.... That's like saying you'll build a new Grand Canyon somewhere or a new Yosemite. This may not be as charismatic and flashy, but it is very important—and it is the only piece that is left" (quoted in Davis 2006).

Fragile species like the fairy shrimp that inhabit near-coastal vernal pools are, admittedly, an extreme case; their extirpation is possible in the short run and overwhelmingly likely in the medium term.[3] One need not hold biocentric or even mildly green views in order to recognize, however, that the extinction of a unique species represents a reduction in the possible scope of future democratic decision-making with regard to that species. Policy regarding fragile species, if it fluctuates as expected in a democratic context, will ratchet toward a single outcome: extinction.

Thus the common democratic presumption of permanent contestation is difficult to sustain with regard to the preservation of endangered species. If, as Miller argues, legitimate democratic politics and ultimately political stability depend on the reversibility of political wins and losses, then clearly sometimes the "develop" side will prevail. Each win for the "develop" side removes habitat from possible use and ratchets fragile species like the fairy shrimp closer to extinction. Once a unique species is extinct, no further decision can be made about it.[4] Both existing political will and present-day technical expertise *could* support

[3] Vernal pools are rare and isolated seasonal wetlands scattered throughout the world's Mediterranean climate regions. Fairy shrimp are small, fresh-water crustaceans that spend their brief active lives swimming upside down in temporary pools, using their many pairs of legs to catch some of the tiny animals and plants with which they share their refuges. The fairy shrimp are unlikely to become objects of public attention, except as a nuisance to developers, since they are not only tiny (less than an inch long), but also absent for most of the year. Their vernal pool habitat can be beautiful in the early spring, when the pools are surrounded by blooming native plants and attracting graceful birds; during the dry season, however, they are essentially dirt patches or mud holes of exceptional, though temporarily invisible, biological value.

[4] Note that my argument does not depend on any particular theory of value accorded to unique species. Anthropocentric theories of value might point to the as-yet-unexplored unique solutions each species has developed over the eons-long course of its evolution, to ecological services provided, or to a role played by each in a complex and humanity-sustaining ecosystem. For my purposes, however, what matters is that there is some unknown value that would be irreversibly lost should the species be allowed to go extinct. Nor is my view absolutist: the extirpation of dangerous new viruses may be adjudged worth the corresponding loss of future

effective policies preventing some extinctions at least over the medium term. The ratchet-like structure of the policy itself, however, presents a surprisingly substantial barrier to species preservation under democratic conditions.

It would be easy at this point to strike a tragic pose and lament the limits of politics. However, I think that the better path involves an examination of the presuppositions that brought us to this impasse. Most significant here is the too-simple distinction between flux and non-flux. The divide between democratic and ecological aspirations for species policy is located here: policy flux enhances democracy at the eventual expense of preservation.[5] But there are really more policy options than this binary opposition reveals. A more nuanced distinction would distinguish between processes that increase democratic opportunities and lead to safer kinds of policy flux, and processes that make a dangerous, ratcheting kind of policy flux under conditions of relative secrecy more likely. Considerations along these lines leads me to suggest a number of institutional reforms that might promote *both* democratic practices *and* the preservation of endangered species (which, it should be remembered, also enhances the scope of future political possibility, and is thus a democratic as well as an environmental value).

Section 2: Mitigating the Ratchet Effect

I think we can begin by agreeing that calls for excluding money and politics from environmental decision-making may be safely ignored. In context after context, otherwise intelligent conservation biologists, philosophers, or control theorists observe dysfunctional species conservation policies and complain that politics has interfered in an otherwise ideal policy. A fascinating 2008 article in the New York *Times*, for instance, identified geoengineering as the next important field for global ethical policymaking. Possibly viable solutions to problems associated with climate change are being proposed by private firms as well as by scholars, including for example seeding the oceans with iron to promote carbon-cleaning plankton blooms, or sending sun-deflecting mirrors into orbit around the earth.

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scope for political decision. I am arguing that judgment about whether to allow species to go extinct ought to be made according to democratic principles, indeed, ought just to be made, explicitly and in public, rather than accidentally, arbitrarily, or even in secret.

[5] Of course the band within which policy fluctuates can be moved by political and natural circumstances. Certainly over the last thirty years, conservation policy in the U.S. has been more effective at preventing extinctions than it would have been without the ESA. See Scott 2006, 31-32. (A democratically legitimate aim for policy regarding fragile species cannot be submission to a single policy set at one time (among other problems, this would violate our right to legislate for ourselves). Rather, we should try to secure the conditions under which future political possibilities are preserved; in this case, the conditions under which acceptable fluctuations in preservation policy remain within a safe zone of non-extirpation.

Scientists quoted in the article acknowledged a need for ethical guidance when considering technologies with such uncertain and potentially world-shattering consequences. They took the political structures of decision-making and control, however, largely for granted. The reporter summarized the views of scientists concerned with the politics of geoengineering as follows: "maintaining the [geoengineering] systems requires a political establishment with guaranteed indefinite stability" (Dean 2008). In fact, many of the scientists interviewed proposed that their work proceed in relative secrecy just so that expert decisions would be shielded from the political domain. "It's better if people don't know about it," was the view attributed to most geoscientists by one of the interviewees (Dean 2008). Philosophers (such as Peter Singer) and conservation biologists (such as Michael Soulé) similarly presume that government could simply implement their conclusions, if only money and politics did not stand in its way. This view of government as a fickle handmaiden of reason will not help us resolve problems with species conservation policies (or any other problems, for that matter).

Instead, the relationship between expertise and democracy ought itself to be the object of democratic decision-making. In the species conservation cases I have looked at thus far (mostly HCPs under the ESA but also some fisheries management), expertise is supposed to provide conclusive limits to the species-endangering behaviors in which we would otherwise engage. Scientific knowledge of policy itself is supposed to have directed the processes approved by governmental bodies (in these cases, HCPs and the setting of sustainable catch limits). Ecological expertise provides the data for constructing habitat conservation plans that will justify local exemption from the strictures of the ESA. And finally, conservation science and control theory, among other scientific disciplines, are supposed to provide ongoing information to guide the implementation and management of these species conservation efforts. In some other areas of policy making (the control theorist Craig Loehle cites rocket science as an example), these engagements of expertise with democratic politics seem to have fulfilled their expected functions (Loehle 2006). In species conservation policy under the ESA, however, the application of expert knowledge to policy often serves only to mask decisions made in advance and quite without any scientific judgment about the viability of the species protection policy under consideration.

Under some circumstances, conservation science is able to succeed, at least in the medium term, at preventing the extinction even of very fragile species. There is a chronic shortage of data and research in these areas (see, e.g., Harding 2001), but even so, scientists have been able to produce recovery plans for many species that we have every reason to believe would work, if implemented (Clark 2002). Under rare conditions such as enormous

publicity (granted to so-called charismatic megafauna like pandas or wolves) or the existence of a simple, single threat to a species (such as DDT's effect of weakening the shells of avian predators' eggs), species have recovered under the protection of the ESA. Obviously, much more could be said on this subject, but for now, let us take it for granted that the barrier to species conservation in the short and medium terms is *political*, not technical (for more on this topic, see below, pp. 28f).

If conservation biology can serve this species-protecting function, what is preventing it from doing so? Not democracy, at least not a lack of democratic will as expressed by the U.S. Congress when it passed the Endangered Species Act in 1973, and again repeatedly over the years as the ESA withstood a series of legislative attacks. As I argue in more detail on pages 26 and 27, steady majorities of the public have supported the goals of the ESA. The barrier to species conservation policy, then, is not lack of democratic will, nor is it technical. It must have to do with the institutional structure of the policy process itself.

I hope to understand these limits much better at the conclusion of my general survey and case studies of habitat conservation plans nationwide. For now, let us consider the implications of the shift from a standard ESA policy regime to the new HCP mode of protection, in the context of the protection of endangered endemic species in vernal pools in coastal southern California. Here the Fish and Wildlife Service (FWS) granted an incidental takings permit (ITP) under section 10 of the ESA to the cities involved in two giant, multi-species conservation plans, despite the plans' scientific and (more importantly) political and fiscal inadequacy. Irreversible destruction of large numbers of vernal pools followed almost immediately upon the granting of the permit, while the promised mitigation efforts never materialized. In this case, the new institutions intended to promote democratic discourse among stakeholders (that is, the use of stakeholder negotiated habitat conservation plans instead of the command-and-control policies of the conventional ESA) failed both democratically and environmentally. The plans presented to the FWS, which granted them exemptions from the strict rules of the standard ESA, were the results of collaboration among scientists, mid-level bureaucrats, developers, and representatives of local government. Considered in themselves, even apart from the later failures of implementation, the plans as written could be better described as laments for what is not yet lost rather than attempts to prevent extinction. As a federal judge eventually complained (in his injunction against the whole plan and his order to the stakeholders to go back to the drawing board), the plan treated the losses as inevitable on the basis of contradictory or often simply missing evidence (*Southwest Center* 2006). One could make an argument that allowing any preventable

extinctions violates the a sort of political version of the precautionary principle: one should seek to multiply rather than foreclose political possibilities, since the scope of future decision-making is irretrievably reduced with the loss of a unique species. But even without that argument, the ironic result of a newly democratized process for biodiversity protection was policy in direct opposition to the democratic will of the people, at least as expressed in the text of the ESA.

The outcome for San Diego's vernal pools illustrates what I have been calling the ratchet effect, though I still need to find out how common this dynamic is through my planned broader study of the country's HCPs. As the conservationists who won an injunction against the San Diego county habitat conservation plans said, the ruling "heartened [them], even though they said much of the habitat they sued to protect has been paved over" (Lee 2006). Besides the obvious implications for conservation policy, the failure of habitat conservation plans despite their promise in scientific terms is interesting for democratic theory. The combination of perverted public discourse that serves to disempower and distract, and the ratchet effect of democratic flux, seems to have produced a hard limit to what plural political agents can achieve.

Still, things may not be all that dire. After all, fairy shrimp in vernal pools near the beach are quite an extreme case of fragility and development pressure. If, like the early American political theorist and politician James Madison, we are not interested in removing the air of democratic policy flux in order to quell the fire of policy failure, we might then turn our interest to shifting the boundaries within which policy fluctuates. A more resilient institutional structure might be able to prevent the ratchet effect from driving a species into extinction for longer than a less resilient structure could.

The relevant distinction, then, would not be between policy flux and no policy flux, but between opportunities for flux that enhance democratic accountability and inclusiveness, and opportunities for flux that subvert those values. A good rule of thumb for distinguishing the two is whether they are transparent and accountable. In the example of the San Diego area HCPs, corrupt practices--of secrecy, running out the clock, shifting standards, lack of data and scientific information, a persistent rhetoric of resigned lamentation for what was in fact not yet lost, and using the open part of the process as a sort of toreador's cape to distract public attention--all contributed to an atmosphere that was neither transparent nor accountable. Though these democratic shortcomings are indeed appalling, they do offer us a path of at least tempered optimism, since they show that the process that brought the San

Diego fairy shrimp so much closer to extinction need not be viewed as the inevitable result of the ratchet effect.

Rather, with the ratchet effect in mind, we can devise institutional remedies to the dynamics necessarily affecting species conservation in a democratic context. These could at least postpone the extinction of fragile species competing with human beings for scarce resources. The idea behind each of these reforms would be to make the policy flux that is an essential part of democracy less dangerous for another essential part of democracy—preserving the objects of future political choice, such as unique species in nature. Institutions that promote democratic but not dangerous flux would include what the communications scholar Michael Schudson calls "agents of accountability."[6] Auditors, inspectors general, and other professional experts in government service are especially able to promote accountability because they have loyalty to their vocations as well as their employers. Journalists and autonomous scientific communities could be more powerful agents of accountability, but to do so they need the freedom to serve long-term interests and vocational norms. Accountability for the full cost of human activities, including ecological costs and estimates of opportunity costs associated with species loss, would be another good step. Though it was certainly a dark chapter for the history of preservation efforts in the United States, one can view the Julie MacDonald affair as evidence that accountability mechanisms can promote resilient institutions.[7] Contingent valuation is far from perfect, but it is certainly better than denying that ecological services have any worth at all. The nascent national database for recovery plan information is a good first step toward having the knowledge needed not only to construct species recovery plans but also to implement and manage them.

Perhaps the most intriguing suggestion in the direction of accountability and transparency in species preservation policy has been made by Michael Soulé and his colleagues regarding a new professional ethic for conservation biologists. Conservation biologists, they argue, should regard themselves as "physicians to nature," by analogy with public health officials. They should always implement the best available practices in keeping

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[6] "Journalism in an Era of 'Truthiness'," public lecture at the Glasscock Center for Humanities Research, Texas A&M University, Spring 2008.

[7] Julie Macdonald is the former Department of Interior official who worked to prevent species from being listed by interfering with data collection and reporting, rather than openly opposing Congress's mandate. After the Union of Concerned Scientists complained, Macdonald was the subject of an internal investigation; she resigned her post in 2007. Felicity Barringer, "Interior Official Steps Down After Report of Rules Violation," New York *Times*, May 2, 2007; Charlie Savage, New York *Times*, "Report Finds Interference In Interior Dept. Actions," December 16, 2008.

their "patients" healthy, even ahead of the law if necessary (Soulé 2005). What interests me about Soulé's suggestion is the idea that a cadre of committed professionals armed with a strong vocational ethos could alter the prevailing political dynamics to make policy flux less dangerous to fragile species. Thus conservation education to produce this cadre of conservation biologists and other knowledge workers, not to mention raising general knowledge, would be a crucial element of the constellation of institutional reforms aimed at mitigating the ratchet effect in the name of preserving species and thus the scope of democratic choice.

My worries about dysfunctional arguments around habitat conservation planning are also Michael Schudson's worries about American civic culture in general; my proposed mitigating institutions are as frustratingly gradualist and antipaternalist as his (see, e.g., Schudson 2008). It is frustrating: there are signs of corruption everywhere, and it is hard to maintain a democratic attitude focused on the enabling of agency and plurality when people are busy avoiding responsibility and celebrating hierarchy. But there have been moments like this before, and moral political argument is still at least theoretically effective in species conservation policy. Schudson asks us to look for "agents of accountability," agents who are especially difficult to find in environmental regulation. In the next section of this paper, I explore another ironic dynamic in conservation politics that allows policy-makers to avoid accountability: devolution of authority from the center to the local level.

Section 3: The Distracting Allure of Localism

A little more than ten years ago, the celebrated political scientist Morris Fiorina wrote a contribution to a volume of essays on civic engagement that he was editing with another famous student of politics, Theda Skocpol. Much of the discipline of political science at the turn of the century was in the grip of enthusiasm for the idea of civic engagement. Robert Putnam and his colleagues were arguing that democratic success depended more on private sector organization and other forms of social capital than on institutional design or economic advantage. Political theorists of many different persuasions were converging on deliberative democracy as the alternative to the long-standing and unpalatable choice between an elitist calculus of reason on the one hand, and dysfunctional aggregation on the other. Theda Skocpol's historical institutionalism was demonstrating the successes that that federated mass-membership organizations enjoyed in pushing the American postwar settlement toward socially progressive policy. Projects aimed at getting ordinary citizens to participate in civic

life blossomed everywhere, encouraged by theorists' arguments and bolstered by some empirical evidence that civic engagement improves public life. Fiorina injected a deflationary note into this expansive atmosphere, warning the discipline that "civic engagement may not necessarily be a good thing" (Fiorina 1999, 396). Civic engagement's boosters may espouse nice values, but did they actually work as scholars of politics suggest?

The centerpiece of Fiorina's essay is a case study of a land-use planning conflict in Concord, Massachusetts.[8] Fiorina describes an incident in which a proposed compromise between development (of a private secondary school's athletic fields) and preservation (of a neighboring wooded area) was opposed by a small group of activists led by environmentalists who were mostly from out of town. The preservationist camp succeeded in delaying implementation of the compromise plan, and, according to Fiorina, the result was first gridlock, then retreat from the concessions than led to the compromise in the first place, and, finally, to intercession by elected officials who managed to reach an expensive mediated solution that nearly everyone agreed was worse than the original proposal. "To some, the preceding case illustrates grass-roots democracy: concerned citizens actively participated in the affairs of their community and materially affected the outcome. To others, the preceding case illustrates the opposite of grass-roots democracy: a few 'true believers' were able to hijack the democratic process and impose unreasonable costs—fiscal and psychological—on other actors as well as the larger community....I acknowledge that my sympathies lie with the second camp. In recent years many academics have exalted civic engagement, seeing in it the solution to social problems and conflicts that have resisted the application of expertise and money. But civic engagement can be expected to have such salutary consequences only if those engaged are representative of the interests and values of the larger community" (402-3).

Having used his case study to suggest that we should not forsake traditional representative institutions for alluring new forms of civic engagement, Fiorina broadens his discussion to the national level. Why, he asks, do we trust our institutions least when they welcome us the most? "Americans trusted their government more when party bosses chose nominees, when Southern committee barons dominated Congress, when legislatures and boards conducted their business behind closed doors, when access to the courts and bureaucracy was restricted, and when big business, big labor, and big agriculture dominated

[8] For another case study with similar conclusions, see chapter 2 of my *Provisional Politics: Kantian Arguments in Policy Context* (2008), which discusses public deliberation around development decisions (and, in particular, decisions about parking) in Princeton, New Jersey.

the interest group universe" (407-408). Acknowledging a welter of plausible partial explanations (interest group overload, distaste for the reality of political dealmaking akin to distaste for the reality of sausage-making), Fiorina arrives at the conclusion already suggested by his case study: participatory politics allows a small number of unrepresentative and often extreme voices to determine outcomes (409). Just as the elected officials were needed to return Concord, Massachusetts, to a compromise between preservation and development (a position Fiorina represents as preferred by a clear majority [399]), Fiorina argues, representative institutions in general moderate the potentially extreme outcomes generated by excessive civic engagement.

Fiorina is of course not an academic environmentalist, but a self-described typical citizen of Concord. "Between deer eating the rhododendrons and coyotes eating the cats, there is a general feeling that nature is doing quite well in Concord. The fall air carries the sound of chain saws, and the spring breezes carry the smoke from open burning of brush. A sizable minority of the town feel that Thoreau was something of a ne'er-do-well" (399). (The reference to Thoreau reminds us, incidentally, that reaching for the mantle of exemplary citizen of Concord, Mass., is not necessarily the modest claim it seems to be, but a gesture toward the authority to articulate what count as genuine American values.) Scholars of politics and academic environmentalists, alike, however, ought to take note of Fiorina's warning. Frustration with the shortcomings of democracy's representative institutions can lead us to reject the devil we know for the one we do not. "Americans have become increasingly unhappy with government at the same time that government has grown ever more open to their influence. I believe that these trends are causally related, because people who take advantage of increased opportunities to participate in politics are often unrepresentative of the general population" (396). Just as civic engagement's "dark side" went mostly unremarked in the wake of widespread academic enthusiasm in the 1990s, so devolution's dark side is mostly invisible today, despite available evidence of its patchy record. In what follows, I shall imitate Fiorina (to a certain extent) by providing a case study and some broader considerations that lead me to question the current enthusiasm for all things decentralized.

Localism in the Literature

We scholars of politics have been enthusing about devolution, recommending local participation, extolling grass-roots ecosystem management,[9] and all the while hardly anyone has been checking to see whether any of this explosion of popular participation in land-use planning is more than an exercise in self-realization.[10] In the case the transition from a conventional ESA to the HCP policy regime, stakeholder participation has risen as democratic accountability has fallen. The story is a long one, and (as I have mentioned) my research is still underway; here I will work with a brief synthesis of the empirical part of the work beyond the vernal pools case discussed already. I am interested in large, multi-species, multi-party habitat conservation plans (HCPs) like those in San Diego, Orange, and Riverside counties in California, Travis county in Texas, and Pima county in Arizona. The original ESA of 1973 prohibited "take" (killing or removing or destroying the habitat) of members of endangered or threatened species. Under the ESA as revised in the 1980s, local citizens have come together with federal, state, and local bureaucrats, scientific experts, and representatives of interested parties to make decisions on land-use planning under the HCP process. Under the old ESA regime, development was hobbled by fairly arbitrary but extremely strict enforcement of the law, while environmental protection was similarly encumbered by the FWS's piecemeal strategy that considered a few highly endangered species rather than promoting habitats at the eco-system level. The new HCPs allow individual land owners (who are not treated in my research) and regional authorities (who are) to receive a blanket ITP from the FWS in exchange for a promise to create a reserve sufficient to promote the recovery of species endangered by the permitted development. Theoretically, the FWS can revoke an ITP if the permit-holding locality fails to fulfill its promise to conserve the species and habitat for which it has assumed responsibility. However, thus far no large HCP has had its ITP revoked.

It is quite likely that I will learn empirical things that affect this paper's theoretical arguments one way or another. For now, let me anticipate one of the paper's preliminary

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[9] Enthusiasm for devolution transcends the field of land-use planning of course; it is widespread throughout political science, urban planning, sociology, and related fields. I shall restrict my discussion to environmental and democratic political theory in the U.S. context here, however.

[10] The self-realization hypothesis is as weak as ever as a justification for participatory democracy. Ask participants and they will say they want justice, not that they seek self-realization. Democratic participation works when it prevents domination, when it helps people have a meaningful effect on the policies that affect them, not when it leaves the participants feeling good about themselves. See Shapiro 1999.

conclusions, which is that HCPs as they now function shortchange conservation effectiveness in favor of stakeholder participation. As I mention earlier in the paper, this is *not* a trade-off between environmental protection and democracy, but a trade-off between one democratic value and another. For now, however, I would like to discuss the treatment of devolution in the environmental and democratic political theory literature.

If you look at recent developments in this literature (or at political theory or political science in general, for that matter), you will see a celebration of devolution, of moving political decision-making away from the center and toward the local level. There are many different terms associated with devolution in environmental policy—grass-roots democracy, civic environmentalism, localism, community-based management, collaborative management, participatory localism, and so forth (see Welch 2004). All these efforts share the idea that local and regional planning should be both more democratic and more successful at conservation than national and transnational governance. The problems at these higher levels should of course not be discounted: localism grew partly out of legitimate dissatisfaction with top-down management. In species conservation planning in the U.S., for example, federal efforts to prevent extinctions are often begun far too late, when the species in question may be prevented from becoming extinct in the near term, but face little chance of a sustained recovery and a near-vanishing chance of thriving without continual intervention. Federal species protection policy under the conventional ESA regime also tended to neglect eco-system wide problems; this is in direct contradiction to established biodiversity science that prescribes conservation of the most unfragmented habitat possible (see Salafsky et al. 2002, Layzer 2008; Winchell and Doherty 2008; see also Soulé 1991 and MacArthur and Wilson 1967). Local landowners were suspicious of national bureaucrats and sought to block or confound them rather than submit to the law. National environmental groups used the courts and their lobbying expertise to achieve top-down prescriptions that seemed to (and sometimes actually did) favor charismatic megafauna over human beings and their interests (Welch 2004). This brief survey of some of the dysfunctions of centralized species conservation governance should make clear that the localist and devolutionary reaction did not occur in a vacuum.

However, the scholarly celebration of localism sometimes seems to have done so. The emergence of decision-making procedures that devolve authority to localities while maintaining national-level oversight must have seemed such a perfect solution to theoretically driven problems in democratic theory that their performance in practice was almost beside the point. "Beyond Backyard Environmentalism: How Communities are

Quietly Refashioning Environmental Regulation," by Charles Sabel, Archon Fung, and Bradley Karkkainin (Sabel et al., 2005) provides a typical example. The authors convincingly criticize top-down, command-and-control, centralized models of governance for ignoring the local commitments and grass-roots knowledge needed for successful environmental regulation. Neither, they argue, can the market provide the public good of environmental protection in most cases; artificial markets in things like pollution credits must get their information about prices and supplies not from millions of decentralized actors (as ordinary markets do), but from bureaucrats in the center, just as in the command model (119). Sabel et al. prefer what they call a "rolling-rule regime," in which authority is devolved to the local level, but national-level accountability mechanisms remain in place; rather than relying on rigid rules enforced from the center, rolling-rule regimes feature constantly updated accountability mechanisms from above and information flows from below. This rolling-rule regime, Sabel et al. argue, has already emerged in some U.S. environmental regulation, notably in the areas of pollution control and species protection. Bringing together traditional antagonists like federal field managers and local land-owners, environmental interest groups and industry representatives, these new regimes are able, they claim, to achieve "levels of cooperation and environmental performance beyond the reach of either [centralized command systems or market-based mechanisms]" (118).

One need not share Sabel's and his collaborators' enthusiasm for harmonious political cooperation to agree that some alternative to centralized command and market-based structures would be a good thing for U.S. environmental policy making. Certainly we need information to move up from the local level as well as continual updating of information (see Rahn et al. 2006, see also Scott 1998). Sabel et al. emphasize that rolling-rule regimes are particularly good at handling novelty: "This framework...puts a higher premium on collaborative processes that allow central and local actors to learn from one another and from their actions in the world. It would use these surprises to revise the rules that frame collaboration..." (120). Adaptive management practices such as Sabel et al. envision are in fact the current gold standard in the environmental policy literature; nearly everyone agrees that for species recovery to succeed, management must adapt continually to new information and new conditions (see, for example, Hierl et al. 2008). It is thus particularly ironic that the very policy regime celebrated by Sabel et al. (the HCP process) was modified to prevent just this kind of updating in 1998; the "No Surprises Rule," promulgated in the Clinton Administration under Bruce Babbit's Department of Interior, protects landowners and encourages them to enter HCPs by guaranteeing that no new landowner-borne costs will

occur based on circumstances subsequent to the plan date. This of course conflicts directly with the imperatives of adaptive management, as many have noticed (see, for example, Layzer 2008).

Sabel et al. do not mention the No Surprises Rule in their discussion of HCPs, though they do devote substantial space to potential revisions to the HCP process that would bring it closer to the rolling-rule regime theoretical ideal. In fact, very few scholars of politics commenting on the HCP process go much beyond Fish and Wildlife Service (FWS) websites and interest group white papers, and Sabel et al. are no exception to this rule. According to "Beyond Backyard Environmentalism," "many leading environmentalists, landowners, public officials, and scientists contend that, on the whole, these agreements produce more, better, and more sophisticated ecosystem management regimes than would emerge from even the strictest application of Section 9 [which prohibits "take" of endangered and threatened species]" (128).

Read that last quotation again, if you will, and then answer the following question. What is added to the theoretical ideal of a rolling-rule regime by this astonishingly meager amount of probably conjectural empirical corroboration? The theory of the rolling-rule regime is worth discussing on its own merits, as I shall briefly do below. Moreover, it certainly makes sense to discuss rolling-rule regimes in the context of the HCP process; HCP boosters in and out of government have consistently represented the process as a "win-win" for environmental protection and development interests, won through a new kind of collaboration. But without an accurate picture of HCPs as they in fact function, Sabel et al. fail to absorb any lessons from empirical reality.

It is telling that nearly all the positive details in the article's description of HCPs are inaccurate, while the details listed in the traditional "caveats" sections are remarkably correct. The article accurately describes the bare facts of the emergence of the HCP process, but confuses ideal performance with actual performance. For example: "these plans require landowners to dedicate large tracts of land for exclusive use as habitat reserves for unlisted as well as listed species" (128). Such requirements comprise the *logical* basis for habitat conservation plans: since their inception, HCPs have been sold as a way to develop especially valuable land that is off-limits to developers due to the presence of endangered species; developers, we are told, may exchange large parcels of less economically valuable but still ecologically important habitat for the right to "take" populations of otherwise protected species from land they want to develop. Certainly land developers have contributed some land to HCP reserves via this mechanism, and they have contributed significant if still

relatively small amounts of money to reserves through fees collected through HCP agencies. But for the large, multi-species, multi-party HCPs which interest me, Sabel et al., and other academics looking at decentralized environmental regulation, the exchange of land for takings permits is much more an ideal than a reality. Take the case of the Western Riverside County Multiple Species Habitat Conservation Plan, for example. A RAND study commissioned by the Western Riverside County Regional Conservation Authority (Dixon et al. 2008) noted that the plan as adopted in 2004 anticipated 41,000 acres to be contributed by private developers. By October 2007, only 657 such acres had in fact been acquired (xx), while 14,677 (of an anticipated 56,000) had been acquired by federal and state governments, and local governments had acquired 20,192 of the 56,000 acres needed. To provide an appropriate sense of perspective on these numbers, consider the ratios of target acreage to acquired acreage from these three sources (federal/state, local government, and developer contributions): for lands to be acquired by federal and state governments, the ratio is 4 to 1; for local government purchases, the ratio is 3 to 1; for developer contributions, it is 62 to 1.[11] The authors comment that "developers have, by and large, avoided projects that would require contributions" (xix). Studies of other large, multi-species HCPs reveal similar gaps between the ideal anticipated in the plan as written and the reality of conservation efforts on the ground; in some cases, such as the San Diego County plans, there are even discrepancies of this type within the written plan itself (see Ellis 2008).

Thus Sabel et al., like most academic commentators, take the declared aspirations of HCPs for the empirical reality of how they actually work. If the Western Riverside County case is typical (something I hope to know soon), then HCPs will have been *marketed* as a great deal for localities which will facilitate development permits in exchange for the land to construct plan reserves, while in practice the HCPs will need to use alternative funding mechanisms to construct the reserves to which they have committed themselves. The RAND study notes that the price of acquiring remaining necessary land will be more than double original estimates (excluding the costs of maintaining reserves, which were also grossly underestimated). If developer contributions continue to fall short, localities will have to make up the difference. The study concludes with a listing of fiscal options for the Western Riverside area, which I imagine made grim reading for local political leaders: raising different types of property taxes, special assessments, development fees, highway tolls, or vehicle license fees (Dixon et al., 2008, 112-128). Thus the empirical reality of large multi-

[11] Source: Dixon et al. 2008; ratio calculations mine, rounded to the nearest fraction.

species, multi-party HCPs differs markedly from the original logic that sold the concept. Taking just one aspect of HCP functioning, exchanges of land reserves for takings permits, and not even considering the HCPs' conservation function, we see that HCPs in practice actually provide a streamlined permitting process for development previously hampered by the presence of endangered species by promising the FWS that the locality will construct and maintain an HCP, the funding of which is semi-fictional in the planning documents which help the locality obtain the ITP from the FWS. Though it is too early to tell in any of these cases, either the tax-payers will fund the HCPs more or less directly, or they will not be constructed on anything like to promised scale. None of this is mentioned in academic celebrations of HCPs as successful examples of devolution and collaborative management, of course. Reading about HCPs in the political theory literature after beginning to study them in earnest is like reading in the *New York Times* about some topic with which you happen to be familiar: the easy authority with which you may have previously credited the source (scholars of politics or elite journalists) tends to evaporate. Sabel et al.'s description of the HCP's requirement that property owners contribute reserve lands is partly accurate as a description of official aspirations, but overall it is utterly misleading.

With regard to negative aspects of HCPs, Sabel et al. are much more accurate, though no more specific; they complain that the FWS "has so far proved far better at dispersing authority to local decision makers than at reviewing the ensuing decisions" (128); they note that without sufficient accountability mechanisms, HCPs can become "unprincipled backroom deals between regulators and regulated" (129). In the absence of specifics, even these accurate descriptions hardly contribute to the overall force of the article's case. However, they do demonstrate that the theory of a rolling-rule regime can provide a normative ideal against which to measure practical progress (if any). The promise of "regulation that is more effective than current arrangements, and more democratic…sounds too good to be true," write Sabel et al., before listing examples that they claim vindicate the prospect (121). Certainly the case of HCPs contributes much less to the reality of the rolling-rule regime in American politics than Sabel et al. might wish. However, it does provide an example of an aspiration to such a regime in practice.

Sabel et al. rely on FWS and environmental group websites, unrefereed policy papers, and law review articles (don't even get me started on law review articles) to corroborate their claim that HCPs are a successful example of devolved, yet still accountable, environmental regulation. They understandably come away with a view of HCP practice that is more aspirational than real. They are, however, in good company. With a few exceptions

(Vanderheiden 2001, Layzer 2006, Layzer 2008, Thomas 2001, Thomas 2003), scholars of politics have been satisfied to adjudge localism's collaborative successes based on partial or superficial evidence, and sometimes even less than that. In a discussion of the future of environmental justice, David Schlosberg simply takes it for granted that "more open and participatory structures of environmental decision making are key….Much has been written on the topic and I see no need to restate basic arguments" (Schlosberg 2005, 109).[12] James Meadowcroft, writing the "deliberative democracy" chapter for a collection on environmental governance, merely asserts that "...a vigorous extension of deliberative democratic practice within the environmental and natural resources (ENR) policy domain can enhance significantly society's capacity to manage environment-related problems in the coming decades" (183). With regard to HCPs, he notes that some "involve complex, multipartite deliberative interactions...outlin[ing] a framework to reconcile conservation with economic development" (205). This is certainly true, but gives us nothing on which we can base a judgment about whether the process "enhances society's capacity to manage environment-related problems" or not. Like nearly every other commentator, Meadowcroft ends his discussion on an equivocal note: cooperative mechanisms "unless they are mere deceptions—they all entail a mutual recognition among the parties that each is a legitimate interlocutor and has a shared commitment to a common enterprise. They vary in the extent to which they embody deliberative democratic ideals" (205).

In fact, most advocates of localism within the field of environmental political theory include caveats to the effect that they recognize decentralization's imperfections.[13] Leslie Paul Thiele, for example, discuses the local side of global-local linkages in the environmental planning of the future: "It is at the local level, they [movement environmentalists] realize, where lasting solutions to most environmental problems will be conceived and carried out" (133). Citing NIMBY activism, however, Thiele then establishes that "localism has its seamy side" in addition to its more promising aspects (135). To take another example, Peter Cannavò's book, *The Working Landscape: Founding, Preservation, and the Politics of Place* (2007) generally advocates a regional, collaborative approach based on a common sense of

[12] It is too early in my research to say for sure, but it may be that the generally positive assessment of HCPs in the politics literature is the result of an information cascade of the sort made famous by Cass Sunstein.

[13] Even Donald Snow, among the most committed of advocates for collaborative management of environmental conflicts, emphasizes the limits that special circumstances like the presence of endangered species exert on collaborative possibilities. Snow 2001. For the classic expression of skepticism towards the western-inflected style of collaborative environmental management championed by Snow, see McCloskey 1996.

place that should allow multiple players to transcend polarized interests. Collaborative conservation is about breaking unproductive deadlocks between polarized interests; it tries to "cultivate local democracy and build community. It responds to the impasse in land and resource issues as well as to the top-down, undemocratic land-use policy process imposed on the American West by the federal government—which owns enormous portions of the West—and by large national environmental groups, resource industries, and large corporations" (267). Cannavò's main example is the Applegate Partnership, which brought together representatives without identifying the group they represented, to open up participation in decision-making about the watershed, and to integrate planning (ecological and economic) (271). Though it is hard to judge whether the collaboration has been a success from the conservation standpoint, Cannavò says that more collaboration and openness and education have resulted from this collaborative effort (273). Even an advocate of collaborative planning like Cannavò, however, provides a caveat: "One should not romanticize these communities" (275). Citing worries that devolution could imperil the management of large-scale problems like endangered species protection, Cannavò adds that locals could possibly serve as fronts for outside interests. Cannavò mentions HCPs in his section on collaborative conservation, but says that they "fall short of direct democratic accountability to the public" (278).

Some Problems with Devolution in Environmental Regulation

The trend, then, among scholars of politics interested in environmental regulation is to celebrate devolution while recognizing its imperfections. There are two different problems with this view from the perspective of democratic theory. First, as Fiorina warned us at the beginning of this section, local participatory institutions may not in fact deliver democratic results. Second, the emphasis on procedures in conservation decision-making distracts scholarship from evaluating the outcomes of those collaborative processes, and thus arbitrarily moves the moment of democratic accountability from whether the public will was subverted to whether the local public was consulted. It is still too early to make a definitive judgment of the efficacy of the nation's large, multi-party, multispecies habitat conservation plans in fulfilling the mandate of the ESA, but what evidence there is points toward accelerated extinction compared with alternative policy regimes such as critical habitat designation. What is forgotten, in short, in these celebrations of HCPs as local participatory models of collaborative management, is that the democratic will of the people to prevent

extinctions is being directly subverted by these very plans. I shall discuss this second issue below; for now, I would like to return to the first, theoretical question of the democratic value of harmonious collaboration.

Like their predecessors in deliberative democratic theory, today's advocates of devolution prefer consensus to conflict, collaboration to directive, and participation to representation. Sabel et al., for example, expect procedures like HCPs to "fundamentally reshape regulatory systems, for the good of democracy and the environment" (116). What, exactly, do they mean by "the good" of democracy and the environment? Certainly there is a devaluation of conflict and a high valuation of cooperation, but one wonders why conflict is necessarily bad for democracy or the environment. What looks like stakeholder cooperation to one person may look like illegitimate corruption to another. After all, the Minerals Management Service of the Department of Interior certainly enjoyed a collaborative, not to say intimate, relationship with its stakeholders between the Reagan years and the recent oil spill in the Gulf of Mexico; it would be hard to argue that this collaboration served any democratic interest. Ian Shapiro once defined bipartisanship as "collusion in restraint of democracy" (Shapiro 2003, 204). If we were feeling contentious, we might define collaborative management as "collusion to avoid accountability" (see below).

More seriously, for Sabel and his collaborators, the democratic good seems to be instantiated not by any particular outcome (preservation, development, or some mix of the two), but by procedures that produce harmonious participation among stakeholders: "The idea is to exercise joint responsibility, not simply to defend group interests. In this process, the new institutions may transform the identities of the users themselves" (121). There are certainly instances in which participation in collaborative institutions transformed citizens' identities in the process (though it is hard to say whether such transformations would always be toward complaisancy in the Hobbesian sense rather than toward a more Machiavellian savvy or some other less harmonious value). Lynn Huntsinger has surveyed Northern California ranchers over many years of collaboration with local range managers, and documented a number of interesting changes in conservation attitudes. However, some of these changes may have more to do with social and economic change (fewer ranchers living off the proceeds of their land, more former-urbanite retiring to life-style ranching) than with the effects of long-term collaboration (Huntsinger 2010). It is very hard to say anything definitive on this topic. It is even harder to specify what Sabel et al. might define as "environmental good." They praise some HCPs for their "inclusiveness and sophistication," by which they apparently refer to land-management practices that integrate not just species

conservation but water policy and development considerations (128). What is lost in both these constructions (of democratic and environmental "goods") is the expressed will of the people to prevent extinctions.

There are many ways to argue for the value of unique species. From within democratic theory, either non-human life must be accorded standing and some kind of representation (see Dobson 2003 and Ball 2006), or else an anthropocentric argument about democracy's preconditions is necessary (see Dryzek 2000: 147, cited in Ball 2006, 135: "democracy...is, if nothing else, anthropocentric"). Not only do democratic policies regarding fragile species ratchet toward a single outcome, they also raise important questions about the scope of public decisionmaking. As I have argued elsewhere (Ellis 2008), a rule of thumb for democrats is "expand rather than foreclose political possibilities." Extinction removes whole categories of decision from the arena of possible political choice (see below).

It is also possible, of course, that the anthropocentric value of a given species may not exceed the value achieved by its extinction.[14] We can make two sorts of argument in cases of irreversible extinction: in the first argument, we can simply presume that the species in question has overriding value, either on account of its uniqueness or because it is in principle impossible to determine what value the species might have to future generations (in this case, all irreversible environmental decisions are normatively similar, regardless of outcome); in the second argument, we can make no such presumption, leaving the question of the value of the object of an irreversible environmental decision open. It is possible that some decisions that remove species from existence, thus reducing future political agency, are nevertheless legitimate. The eradication of smallpox, for example, would not in principle be mistaken, though decisions by the American and Russian governments to keep samples available despite the risk underscores a common understanding of the value of reversibility in political decision-making. Taking the question of value as open, we can imagine a number of plausible positions. One might argue, for example, that the mere existence of a unique species provides irreplaceable potential aesthetic benefits to current and future generations. These benefits are potential because they require work and sensibility on the part of the human beings who are to enjoy them, but they also depend on the existence of the species in question. A species (say, the Riverside fairy shrimp) illustrates a mode of being, provides potential opportunities for observation and interaction, and enriches the category of living things in ways that cannot be reproduced by anything else; thus the Riverside fairy shrimp is

[14] This account of the arguments for the value of unique species (pp. 25-27) is adapted from my earlier discussion (Ellis 2008).

uniquely potentially aesthetically valuable. To illustrate this point, think of the way the poet John Keats interacted aesthetically with the nightingale in his famous ode (though of course aesthetic benefits need not be drawn via poetry or any other conventionally aesthetic activity):

> Thou wast not born for death, immortal Bird!
> No hungry generations tread thee down;
> The voice I hear this passing night was heard
> In ancient days by emperor and clown.

Keats treats the nightingale as immortal because so long as its species persists, nightingale song of the kind an individual nightingale happens to be providing will continue to exist.

A more concrete argument for the potential anthropocentric value of a single species like the San Diego fairy shrimp is this: each species, as the product of very many years of adaptive evolution, contains within itself unique solutions to problems that independent research might never uncover. For example, in 2005, the U.S. Food and Drug Administration approved the first of a new class of drugs for type II (adult onset) diabetes [Byetta]. These drugs, which aim to stabilize blood sugar with less risk and volatility than insulin or other existing alternatives, were developed after a scientist working with Gila monster (Heloderma suspectum) saliva noticed a similarity in one of its short proteins to a human counterpart. Gila monsters are large, venomous lizards found in the Sonoran Desert of the southwestern United States and northwestern Mexico. Though far too little is known about the internal chemistry of the Gila monster, its life history provides suggestive details for those searching for diabetes drugs: the animal eats only a few huge meals per year, spending the majority of its time underground in a near-dormant state, and thus (considered as a species) has evolved a possibly unique biochemical response to the problem of stability in blood chemistry. The Gila monster is listed as endangered by the New Mexico Game and Fish Department. Gila monster habitat in the deserts of the American southwest is under pressure from urbanization and from recreational activities, among other threats. Loss of the species before its biochemistry has been understood would mean loss of a potentially valuable class of diabetes drugs, in addition to the aesthetic and ecological losses extirpation of the species would entail.

The case of diabetes drugs based on Gila monster saliva recalls the more famous cases of drugs based on rain forest species and the efforts of international drug companies to

patent them. But the practical benefits to human beings from the existence of unique species are not exhausted by aesthetic or medicinal services. As Lynn Huntsinger has suggested, the economic value of naturally provided services is both enormous and grossly undercalculated by conventional accounting methods (Huntsinger 2010). Though we now know enough to make educated guesses about the environmental services provided by the atmosphere generally, by intact watersheds to prevent flooding, by the soil and ocean in providing food, and so forth (and in fact some of these kinds of values are beginning to be included in cost-benefit analyses by governments and international agencies), the state of knowledge on the environmental services provided by the overwhelming majority of extant species is near zero. Few would have guessed that Gila monster biochemistry might lead to an important new drug to fight diabetes, though of course the success or failure of that drug is still unknown. In sum, unique species provide potential value to humanity in at least three ways: aesthetically, as informational and direct resources themselves, and as part of service-providing ecosystems. It irreversibly narrows the scope of democratic decisionmaking each time we choose to allow a species to become extinct.

In this discussion of devolution, however, I am less interested in whether a democratic outlook requires us to attempt to preserve biodiversity than I am in the expressed public will of people in the United States with regard to the ESA. If collaborative institutions such as HCPs are to serve both the democratic and the environmental good, as Sabel et al. suggest, then they need not only to incorporate procedures that are reasonably democratic, but they must also pursue the substantive democratic good of the people's expressed interest.

What is that interest in this case? In the first place, we have the text of the 1973 Endangered Species Act itself, which declares that "these [endangered and threatened] species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people." Though it was revised in the wake of the famous snail darter case, in which construction on a nearly-finished hydroelectric dam was temporarily halted to prevent harm to a tiny, rare fish, the ESA has in the main withstood attempts to weaken it. Given the enormous economic and political power of the interests subverted by the Act, withstanding major revision is no small accomplishment, and testifies to the enduring value of species conservation for at least that portion of the American people represented through acts of Congress.

Another measure of public commitment to endangered species preservation comes from willingness to pay. This can be expressed in real terms through the passage of bond measures or other direct means of raising money, or expressed in the abstract through

contingent valuation (in which scholars ask participants to make decisions about the worth of non-market good like clean rivers). Deliberative polling (in which subjects are given time to discuss and learn about topics and are then polled about their views) shows majority willingness to pay for environmental protection even among residents of the state of Texas (Luskin et al., 1999). San Diegans passed a huge sales tax measure in 2004 that included close to a billion dollars for the environment (Layzer 2006, 456). That same year, residents of Pima County, Arizona passed a bond measure that allowed the Sonoran Desert Conservation Plan to move forward even without an approved ITP from the federal government (SDCP 2010).

Public opinion polls and other kinds of surveys of people's views on species conservation present a mixed set of findings, but plenty of evidence that clear majorities of Americans support the goals of the ESA. Support for the law dips during moments of public controversy, and during economic hard times, species conservation is viewed as relatively less important (Knight 2008, Gallup 2010). Czech and Krausman report substantial support for the ESA from a mid-1990s survey they conducted: "Five-percent of respondents would like the ESA revoked, 11% would like it weakened, 35% want it retained as written, and 49% want the ESA strengthened. There was no significant difference in overall species valuation between people from the East (eastward of the Great Plains) and people from the West, and similarly low proportions from the East (14%) and West (19%) favor weakening or revoking the ESA. However, among those preferring to maintain the ESA as written or strengthen the ESA to protect more species, a higher proportion (53%) from the East want it strengthened. In the West, 41% want the ESA strengthened" (Czech and Krausman 1997). The Gallup poll has asked about people's worry about extinction since 2000: combining "a great deal" and "a fair amount" to arrive at general worry about extinction, there has been no year in which worry was below 60%. Combining "a great deal" and "a fair amount" responses to a question about worry about "loss of natural habitat for wildlife" yields a pretty consistent number: 85% (1989), 81% (1990), 80% (1991), 82% (1999), 82% (2000), 81% (2001), 77% (2008) (Gallup 2010).

Of course snapshot, short-term, and anecdotal data like this can only gesture toward the existence of public support for protection of endangered species. There are well-known difficulties with public opinion polling and other methods of surveying people's views, and I would be loath to take easy responses to a telephone pollster as a proxy for the kind of political will that has policy effects in our pluralist environment. Nevertheless, for the

purposes of this paper I think it is safe to presume that protection of endangered species is a policy that enjoys the support of solid majorities in this country.

This brings me to the second problem with contemporary celebrations of devolution in the case of HCPs (the first, you remember, being the theoretical concern that prioritizing consensus over conflict may not necessarily produce democratic results): if clear majorities of citizens favor the ESA and its goal of protecting endangered species (and if, as I argued on pages 23-26, the conditions of democratic self-governance enjoin us to preserve as much unique biodiversity as possible for future generations), then it is undemocratic to subvert those goals. Ironically, the trend in environmental regulation from top-down federal command to devolved local authority has, in the case of HCPs, produced the antidemocratic result of increasingly likely extinctions. The details remain to be worked out, but the general point is clear even from the synthesized sketch of large multispecies multiparty HCPs given here: all the procedural inclusiveness and management sophistication of the new modes of administering the ESA have distracted us in the academic community from the most important fact about HCPs, which is that they promote extinction.

HCPs and Species Extinction

HCPs promote extinction in two main ways: first, as they function in practice, they allow take of endangered species and of habitat that supports them without adequate mitigation to promote recovery; second, they undermine democratic accountability for the prevention of extinction by disrupting chains of responsibility and by promoting a rhetoric of incapacity that makes technically preventable extinctions seem inevitable.

Conservation biologists and scholars of environmental management have produced a number of interesting studies examining the performance of HCPs. The overall message from the literature is this: adaptive management planning as envisioned in the HCP process could promote species conservation, but many obstacles stand in the way of that outcome. Recovery plans produced by biologists for the FWS often lack sufficient data; however, researchers judged that despite the lack of adequate baseline surveys and other problems, most recovery plans are scientifically sound guides to preventing extinctions (Boersma 2001). One aspect of the HCP model of reserve construction of which conservation biologists approved was its goal of constructing the largest areas of unfragmented habitat possible (Salafsky et al. 2002, Layzer 2008; Winchell and Doherty 2008; see also Soulé 1991 and MacArthur and Wilson 1967). On the other hand, recent studies have suggested that

species protected under single-species conservation plans may be more likely to recover than those with only multiple-species plan protection (Boersma 2001; Taylor et al. 2005; Rahn et al. 2006).

Large multi-species HCPs are consistently faulted for: inadequate baseline surveys, dramatically inadequate funding mechanisms, inadequate monitoring plans, insufficient attention to recovery of listed species, inadequate land acquisition, errors in data and scientific assumptions at the plan level, and vague mitigation requirements, among other problems (Harding 2001, Salafsky et al. 2002, Knight et al., 2006, Rahn et al. 2006, Hierl et al. 2008). HCP measurement problems are particularly interesting, as they allow the appearance of responsibility to persist even as the conservation effort is being undermined. In my 2008 study of vernal pool conservation under southern California HCPs, I noted that the measurement of "take" for vernal pools was the pool surface area, while the measurement of mitigation effort was a pool catchment area--a much larger surface (Ellis 2008; see also *Southwest Center* 2006 and Final MHCP Plan 2003). Hierl et al. complain similarly about the same HCP that "nonnative (low conservation value) and native (high conservation value) grasslands were not consistently differentiated in the vegetation map, so overall prioritization of grasslands at the aggregated level is uncertain" (Hierl 2008, 173). These apparently innocuous measurement problems can add up to illegitimately permitted development that threatens fragile species like vernal-pool dwelling fairy shrimp with extinction. To complain about measurement in these cases is not to nitpick: one study found, for example, that "on average, 41 percent of the species covered in the plans had not been confirmed in the planning area" (Rahn 2006, 615).

My study of vernal pool conservation under southern California HCPs illustrated the dysfunction of this mode of governance as means of preventing extinction. For extremely fragile species like the fairy shrimp, which are endemic to seasonal pools near the coast on some of the most valuable undeveloped real estate anywhere, every instance of habitat loss is serious. The HCP recognized this fact and the plan envisioned no net loss of vernal pool habitat, but in practice the permit made it possible for local authorities to pave a large number of pools before the courts stepped in. This result is neither surprising nor atypical. Regional authorities view HCPs primarily as a means to streamline the permitting process; conservation is usually an ancillary goal, despite the fact that HCPs are granted under the ESA (see, e.g., Dixon, et al 2008). Conservation biologists complain about the attitude taken by FWS: "Unfortunately, our results suggest that, rather than demanding more information, USFWS has been inclined to issue permits in the absence of data, relying instead on

professional judgment. This is a dangerous practice" (Rahn et al. 2006). This same inattention to fulfilling the mandate of the ESA pervades the scholarly celebration of HCPs as instances of successful devolution discussed earlier in this paper. It is too early in my research to say for certain, but I would not be surprised to find extinction prevention subordinated to the goal of collaborative decision-making in most if not every large, multiplayer, multispecies HCP.

Thus the democratic goal of extinction prevention—mandated by the ESA and undergirded by public opinion and public action in the form of bond issues and many other expressions of support—is subverted by the new HCP regime, even as that regime was supposed to democratize the process. Accountability for species conservation is undermined in the HCP process by what may well be a pervasive rhetoric of incapacity (which I have documented in the San Diego county cases for vernal pool habitats, but which I would not be at all surprised to find in many other instances). Despite biological recovery reports outlining the steps required to fulfill the ESA's recovery mandate for each covered species, and despite the fact that much of the habitat needed to promote the recovery of fragile listed species is not yet developed, HCPs tend to treat the extinction of at least the most fragile species as inevitable. The pervasive lack of data serves the rhetoric of incapacity well, allowing participants in the collaborative management process to pursue the construction of HCP reserves while permitting development that may later be discovered to have irreversibly harmed a listed species. In the case of gnatcatcher conservation in the northern part of San Diego county, for example, HCP participants recognized in print that the largest area of unfragmented and undeveloped gnatcatcher habitat would do the most to promote the species' recovery in the planning area, and yet they declined to include it in the planned reserve, substituting inferior "stepping stone" reserves instead, and remarking that the development of this area was inevitably going to be permitted. The discussion mentioned that damage to gnatcatchers wrought by this new development would be effectively mitigated by the presence of large areas of habitat at nearby the marine base of Camp Pendleton. The HCP planners for northern San Diego County have no authority over development and conservation decisions at Camp Pendleton, but they chose to rely on it to promote the recovery of one of the species whose welfare they had pledged to promote through their ITP application (Final MHCP Plan 2003). Clearly, the fact that others bore some responsibility for gnatcatcher protection made it easier for HCP planners to avoid accountability.

What, then, is the proper moment of democratic accountability for extinction? The hoary old principle of "ought implies can" guides us to the idea of *capacity* as a marker of

responsibility for species preservation. Accountability must in the end be lodged with actors capable of hindering extinction. The examples of large multi-party, multi-species HCPs in practice show us that dividing responsibility for extinction prevention among localities serves to allow actors to dodge responsibility for species recovery, even while the ESA requires them to accept it.[15] The examples of gnatcatchers versus the fairy shrimp make a useful contrast: gnatcatcher habitat is gravely threatened, but divided among several HCPs. Thus even in writing the plan, participants were able to accept local extirpation with no real prospect of mitigation without having to admit that they promoted extinction and reneged on the promise to promote recovery. With locally endemic populations of fairy shrimp, by contrast, the written documents hid their equivocation more thoroughly (using incompatible measurement standards rather than frank admissions of take); though local actors did fail to protect the vernal pools under their jurisdictions, they were not able to deny that they were accountable and thus ultimately were enjoined by the court to stop paving vernal pools (Ellis 2008).

An Interim Conclusion

The HCP process thus provides us scholars of politics with a cautionary tale. We may well have good reasons to be interested in devolution as a route to improved democratic practice. Sabel and his colleagues are not wrong to seek alternatives to top-down or market-based methods of environmental governance. But we should not presume that collaborative management necessarily works in practice as it does in theory, nor should we expect that all good democratic things go together. What is missing in all the celebrations of localism in the politics literature, I think, is attention to the real goals of concrete participants. Distracted by the new participatory procedures utilized in designing HCPs, we miss the fact that they are being used by local authorities and development interests to irreversibly remove some objects of democratic choice—some unique and irreplaceable species— from future generations' table of options.[16]

[15] Unlike the standard ESA, which mandates commitment to the recovery of a listed species, HCPs usually commit themselves to "not jeopardizing" them. This is a matter of some contention, since different parts of the law mandate different standards, and which standard is applied makes a measurable difference to species conservation (see Rahn 2006).

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