

TRANSPARENCY AND OPACITY IN ENVIRONMENTAL GRANDFATHERING

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Regulatory schemes designed to further sustainable development – whether through pollution control or natural resources preservation – often employ grandfathering, that is, granting legal rights based on activity that predates the regulatory regime. Transparency in the context of grandfathering must be nuanced. Government should be transparent about incentives to engage in environmentally valuable behavior, but government should not be transparent to the extent that grandfathering relies on prior behavior that is detrimental to the environment and sustainable development.

Consider first grandfathering based upon prior behavior that is environmentally detrimental – for example, allocating fishing quotas based upon prior years' catches. When a government wishes to distribute grandfathering rights to societal actors who currently engage in a behavior that will soon be restricted, the societal actors may engage in inefficient behavior to secure additional property rights. Such behavior may artificially increase pollution emissions, prematurely and inefficiently deplete natural resources, or both. To minimize the undesirable incentive, the government may employ a “retrospective allocation” based on activities that predate the limitations on resource access. Legal uncertainty makes it more difficult for societal actors to modify their behavior. Such systems have become increasingly common in the context of environmental and natural resource regulation.

Over time, societal actors likely will come to expect retrospective allocation, and act in anticipation by engaging in the behaviors on which they predict the allocations will be based. In order to combat this gaming of the system, the criteria for winning allocations must change over time for retrospective allocation to maintain effectiveness on an ongoing basis. In other words, too much transparency in this context leads to inefficient behavioral distortions and poor environmental consequences; opacity serves to ameliorate these outcomes.

¹ This project builds upon my prior work on environmental grandfathering. See Jonathan Remy Nash & Richard L. Revesz, *Grandfathering and Environmental Regulation: The Law and Economics of New Source Review*, 101 NW. U. L. REV. 1677 (2007); Jonathan Remy Nash, *Allocation and Uncertainty: Strategic Responses to Environmental Grandfathering*, 36 ECOLOGY L.Q. 809 (2009); and Jonathan S. Masur & Jonathan Remy Nash, *The Institutional Dynamics of Transition Relief*, 85 N.Y.U. L. REV. 391 (2010). For valuable feedback, I am grateful to participants in a workshop at the Second Annual Sustainability Conference for Legal Educators at the Arizona State University Sandra Day O'Connor College of Law for valuable feedback.

In contrast, consider grandfathering of rewards for positive behavior – for example, awarding credits to societal actors who voluntarily reduce pollution emissions before a regulatory regime requires such reductions, or who make factories fuel-efficient before increased fuel efficiency is required. Whereas distortions by actors in attempts to garner more grandfathering rights by engaging in environmentally detrimental behavior is undesirable and should be discouraged by relying on some measure of opacity, environmentally desirable behavior should be encouraged via transparency. Assuming the government has decided upon behaviors it would like societal actors to undertake, the government should announce those behaviors and be transparent about its desire to provide positive benefits in the future. Such transparency will “lock the government in” and create greater incentives for societal actors to engage in the desired behaviors early in time, thus providing environmental benefits even before a regulatory regime is enacted and become binding.

Before proceeding, I believe it important to identify an important caveat to the arguments I discuss here. I do not mean here to endorse grandfathering as normatively desirable. As I discuss below, legal and economic commentators have criticized grandfathering as a form of “transition relief” that is, relief from a transition in legal rule. These commentators argue that grandfathering inefficiently discourages actors from anticipating legal changes; they assert that it would be more efficient to subject all societal actors immediately to new legal regimes. While (as I also discuss below) there are arguments in support of limited grandfathering under limited circumstances, the arguments I make here have application so long as whatever the reason, and whether or not it is normatively desirable grandfathering continues to play a prominent role in environmental regulation.

The balance of this chapter is organized as follows. Section 1 provides an overview of the role of grandfathering in environmental regulation. Section 2 explains how opacity should figure prominently in the government’s allocation of grandfathered rights on the basis of environmentally undesirable behavior. Section 3 discusses how, in contrast, the government should be transparent in identifying desirable behavior that it will reward with grandfathered rights. Section 5 concludes.

§1 – GRANDFATHERING IN ENVIRONMENTAL REGULATION

Environmental regulatory regimes sometimes take the form of systems that involve the distribution and trading of permits to (in some way) degrade the environment. I refer to these systems generally as “tradable environmental degradation permit systems”. Regulators sometimes design these systems to allocate permits based upon participants’ past behavior. For example, transferable quota schemes put in place to regulate fisheries sometimes allocate fishing quotas based upon prior fishing history. The general rationale is that, while preservation of the fish subject to catch

should be limited, the reduction in fishing should be borne proportionately by those who have historically participated in the fishery. As another example, tradable pollution permit schemes often allocate permits based upon the scope of participants' prior polluting histories. The logic here is not to reward polluting behavior, but rather recognition that those who pollute engage in some societally desirable behavior (such as the production of a societally beneficial product) with pollution as a byproduct. Indeed, in addition to the normatively ambiguous notion of "buying off" politically powerful interests,² there are several justifications for allocating permits based on past behavior that has led to environmental degradation. These include striving improving economic efficiency,³ encouraging socially productive investments,⁴ maintaining government legitimacy,⁵ and concerns of fairness.⁶

At the same time, allocations can also factor in aspects of past behavior that are more societally beneficial. For example, a transferable fishing quota allocation might factor in besides past fishing history the extent to which fishers employ tools that are more ecologically friendly.⁷ And a tradable pollution permit regime might consider in addition to pollution history the extent to which polluters employ more efficient, or less pollutive, technologies.⁸ Whatever the basis on which permits are to be grandfathered, the existence of grandfathering creates an incentive for private actors to engage in behavior that will garner or will be sufficiently likely to garner grandfathered permits. Environmental degradation permits

² See Saul Levmore, *Changes, Anticipations, and Reparations*, 99 COLUM. L. REV. 1657, 1665-66 (1999) (describing transition relief as way to compensate politically powerful interests who otherwise would stand to lose under, and therefore would oppose, new legal regime); for discussion, see Masur & Nash, *supra* note 1, at 400-01.

³ See Steven Shavell, *On Optimal Legal Change, Past Behavior, and Grandfathering*, 37 J. LEGAL STUD. 37, 38-39 (2008); for discussion, see Masur & Nash, *supra* note 1, at 398-99.

⁴ See Jonathan Masur, *Judicial Deference and the Credibility of Agency Commitments*, 60 VAND. L. REV. 1021, 1025, 1041-47 (2007) (arguing that vulnerability to legal transitions may discourage investment); Nash & Revesz, *supra* note 1, at 1727-28 (noting that limited transition relief might be justified on grounds of investment efficiency); Kyle D. Logue, *Tax Transitions, Opportunistic Retroactivity, and the Benefits of Government Precommitment*, 94 MICH. L. REV. 1129, 1138-43 (1996); (arguing that without transition relief, tax incentives may become more expensive to government); Lawrence Blume & Daniel L. Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 CAL. L. REV. 569, 582-99 (1984) (contending that absence of private insurance against government action may necessitate compensation for government takings in order to minimize suboptimally low investments); for discussion, see Masur & Nash, *supra* note 1, at 399-400.

⁵ See Nash, *supra* note 1, at 831, 833-34; for discussion, see Masur & Nash, *supra* note 1, at 401.

⁶ See Nash & Revesz, *supra* note 1, at 1730-31; Kyle D. Logue, *Legal Transitions, Rational Expectations, and Legal Progress*, 13 J. CONTEMP. LEGAL ISSUES 211, 213 (2003) (noting that "competitive, evolutionary pressures" that make corporations likely to anticipate risks do not apply to individuals); DANIEL SHAVIRO, WHEN RULES CHANGE: AN ECONOMIC AND POLITICAL ANALYSIS OF TRANSITION RELIEF AND RETROACTIVITY 101-03 (2000); for discussion, see Masur & Nash, *supra* note 1, at 401-02.

⁷ Under U.S. federal law, for example, the Magnuson-Stevens Fishery Conservation and Management Act directs that regional fisheries (which are allowed to implement tradable fishing quotas) are to develop "[c]onservation and management measures [that] [...], to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch." 16 U.S.C. § 1851(a)(9).

⁸ See Nash, *supra* note 1, at 820 & n.44 (citing the allocation method under the sulfur dioxide trading program of the U.S. Clean Air Amendments of 1990).

are, after all, under these regimes a valuable commodity. Under a cap-and-trade regime, the total amount of degradation is capped, and private actors may only engage in behavior that degrades the environment to the extent that they own permits. (And the value of a permit increases still more under a system, such as the sulfur dioxide trading system under the United States Clean Air Act, that allows for “banking” of permits for use in future time periods.⁹) Grandfathered permits thus are valuable commodities that one receives free of charge (and that others must spend capital to obtain).¹⁰ In response, it is reasonable to expect private actors to consider changing their behavior in order to obtain grandfathered permits. The question that arises is the degree to which the interests of private actors to alter their behavior aligns with the interests of society to have those behaviors changed. Sometimes private behavior alterations may produce an environmental benefit; in that case, private and public interests align. In other situations, however, private behavior alterations may exacerbate environmental problems, in which case the private and public interests diverge. It is this dichotomy that should drive the extent to which transparency or opacity drives the grandfathering allocation process.

Section 3 proceeds with allocations based (at least in part) on prior behavior that is detrimental to the environment. Section 4 discusses allocations based on prior behavior that is valuable to the environment.

§ 2 – ALLOCATIONS BASED ON PRIOR BEHAVIOR THAT IS DETRIMENTAL TO THE ENVIRONMENT

Consider how a government (whether led by a legislative or regulatory body) might seek to rely on the prior behavior of private actors that is undesirable for example, fishers’ past record at catching fish in allocating environmental degradation permits. First, the government might announce in year T that it will award permits starting in year $T+1$ based upon behavior engaged in year T . A potential problem with this approach is that private actors easily might learn of the government’s plan, and attempt to game the system by adjusting their year T behavior in order to secure more allowances in future years. This outcome is highly undesirable, since it means that behavior that degrades the environment will take place suboptimally early (since actors will, in effect, be engaging in detrimental behavior in order to gain permits to continue to engage in that behavior in the future) and at a suboptimally high rate.

To avoid this opportunity for gamesmanship, the government might instead turn to retrospective allocation that is, an allocation of permits based upon a period of time during which private actors

⁹ See 42 U.S.C. § 7651a(3); 40 C.F.R. § 73.36.

¹⁰ See Jonathan Remy Nash, *Too Much Market? Conflict Between Tradable Pollution Allowances and the “Polluter Pays” Principle*, 24 HARV. ENVTL. L. REV. 465, 505-06 (2000)

are not certain that that will in fact be the case. In a simple form, the government might announce in year T that it will award permits starting in year $T+1$ based upon behavior engaged in year $T-1$. Here, the opportunity for gamesmanship is circumscribed (if not eliminated), since the allocation will be based upon a period of time before the allocation was a possibility.

But there is a problem with this simple and ultimately opaque version of retrospective allocation: It does not square with reality. In particular, it relies on the plans for an environmental degradation permitting scheme complete with allocated permits remaining draped in secure opacity. In reality, however, it is hard to imagine a government being able to keep such plans hidden. This is especially the case since the formulation of a permit scheme complete with the details on allocating permits will often take years in and of itself.

Another alternative could be to base allocation on actions taken not in the previous year but rather years early, in order to account for the time it takes to put together a permit scheme for example, announcing in year T that it will award permits starting in year $T+1$ based upon behavior engaged in year $T-5$. That, however, runs the real risk that the ultimate allocations will be substantially divorced from actors' recent behavior. This is a problem insofar as grounding permit allocations on prior behavior is justified at least in part to be fair to actors' reasonable reliance interests.¹¹⁾

Faced with these concerns, the government might think strategically and realize that neither pure transparency nor pure opacity is the order of the day. Instead, the government might opt for partial opacity, by employing an allocation that distributes permits to actors based on behavior undertaken when those actors could have surmised but still could not have been certain that that behavior would affect the ultimate allocations. Consider, for example, the decision by one U.S. fishery council (an entity authorized under U.S. law to implement tradable fishing quotas in order to manage a fishery) to allocate fishing quotas to owners and lessees of vessels based on legal fish landings in years before the regulation was put in place. In particular, under a regulation that became effective in the mid-1990s, owners and lessees of vessels that made legal landings of halibut or sablefish during 1988, 1989, or 1990 were eligible for individual fishing quotas (IFQs); each such owner or lessee received a quota share based on the vessel's highest total legal landings of halibut and sablefish during 1984 to 1990.⁴⁰⁾ Every year, the regional director allocated IFQs by multiplying the eligible person's quota share by the annual allowable catch.¹²⁾ The regulation rewarded behavior well prior to the enactment (and indeed even the design) of the provision.¹³⁾ Owners and lessees of vessels that happened to make legal landings during one three-year period (1988-90) but not those that made legal

¹¹⁾ See *supra* 1 and accompanying text.

¹²⁾ 50 C.F.R. §676.20(b), (f)(1).

¹³⁾ See 58 FED. REG. 59,375-03 (Nov. 9, 1993).

landings for 25 years prior thereto or in the years following received quota shares. Put another way, some owners and lessees received property interests in excess of the legal landings of fish that they knew at the time they were receiving.¹⁴

Such an approach which I term “retrospective allocation is partially transparent because it envisions the government taking into account behavior engaged in after the public announcement of its intent to put in place a tradable permit scheme. At the same time, retrospective allocation also includes elements of opacity, insofar as, while private actors are fully aware of the imminent implementation of a tradable permit scheme (with grandfathering), they cannot be sure exactly what behavior will secure grandfathered permits. Under such circumstances, actors who do alter their behavior in the hope of obtaining a larger allocation do so based on (at least some degree of) speculation.

Retrospective allocation employs elements of opacity to generate legal uncertainty, and thus to achieve two goals. First, legal uncertainty acts to reduce undesirable behavioral alterations. If societal actors are unsure of the precise method by which property will be allocated, then they are limited in the specific steps on which they can rely to obtain for them later access to the property. The introduction of uncertainty into the precise content of ex post rules limits the ability of societal actors to adjust their ex ante behavior.¹⁵ To this logic in play, consider the allocation of fishing quotas set out above. In an environmental impact statement governing that fishing quota allocation, the fishery council explained:

“[E]xtending [the qualifying period] beyond [1990] would have provided an incentive both for additional fishermen to enter the fishery and for previous entrants to adopt extreme fishing methods in order to increase their landings and, therefore, the [quota shares] they would receive if an IFQ program [were] implemented.”¹⁶

Subsequently called upon to consider a legal challenge to the allocation method, a U.S. federal court found it “persuasive” that, “if participation in the fishery while the rule was under consideration had been considered, then people would have fished and invested in boats in order to obtain quota shares, even though that would have exacerbated overcapacity and made no economic sense independent[] of the regulatory benefit.”¹⁷ The court further noted:

“Had the Secretary [of Commerce] extended the 1990 cutoff, the incentive to pour money and time into the fishery in order to get a bigger quota share, for those who could afford a long term speculation, would have been enormous.”¹⁸

¹⁴ See Nash, *supra* note 1, at 819.

¹⁵ See *id.* at 825.

¹⁶ *Alliance Against IFQs v. Brown*, 84 F.3d 343, 346 (9th Cir. 1996) (quoting a 1992 environmental impact statement).

¹⁷ *Id.*

¹⁸ *Id.* at 348.

For these reasons, retrospective allocation's deployment of opacity provides it an advantage, in terms at least of incentive effects, over allocations based on a pure race to capture. But will this advantage persist over time? Consider the likelihood that, as the implementation of retrospective allocations becomes more commonplace, societal actors will anticipate that implementation and thus try to adjust their behavior to maximize the probability that they will obtain grandfathered rights despite the legal uncertainty inherent in such allocations. After all, the first time a retrospective allocation is implemented, societal actors will likely be caught completely off guard. The same may be true the second and third times. Eventually, however, it is reasonable to expect at least sophisticated societal actors to anticipate such schemes.¹⁹

In the analogous setting of incentives for landowners to develop land before government restrictions on regulation take effect, Professor David Dana has identified two reasons to expect accelerated development that seem applicable to the setting of natural resources depletion. First, "the potential scope of preservation regulation is now so broad that the owners of virtually any undeveloped land in the United States know or should know that they are subject to some risk of future developmental controls."²⁰ Second, "although the potential scope of ecological preservation is now vast, its actual progress has been gradual. With respect to any particular ecological resource, the lag time between the date of the first serious proposal for preservation regulation and the actual implementation of such regulation is often many years."²¹ If (as seems all but inevitable) there is a time lag between proposal of a regulation and its actual implementation such that societal actors have ample opportunity to anticipate and plan for the new regulatory regime how can retrospective allocation remain sufficiently uncertain in order to retain its efficacy?

The question is made more complicated because society ordinarily wants societal actors to anticipate legal change. Law-and-economics theorists argue that it is efficient for societal actors to anticipate, and adjust in advance to, changes of all sorts.²² Government does not generally provide relief from these types of changes; legal change, they explain, should be treated no differently.²³ And, it is not unreasonable to expect at least

¹⁹ Cf. David A. Dana, *Natural Preservation and the Race to Develop*, 143 U. PA. L. REV. 655, 681 (1995) (noting that owners of undeveloped land know or should know about the risk of future land use control).

²⁰ *Id.* at 681.

²¹ *Id.* at 683.

²² See Nash & Revesz, *supra* note 1, at 1726 (explaining that, under the dominant law-and-economics approach to legal transitions, transition rules that lessen the effect of legal regime shifts are undesirable insofar as they inefficiently discourage societal actors from anticipating legal change).

²³ See, for example, Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509, 584-87 (1986); cf. Ann Woolhandler, *Public Rights, Private Rights, and Statutory Retroactivity*, 94 GEO. L.J. 1015, 1055 (2006) (noting the law and economics literature that views "prospective and retroactive regulatory changes as essentially equal" in that "[b]oth may upset expectations, creating economic winners and losers," and that concludes that "[p]arties should be encouraged to anticipate legal change, whether nominally retroactive or prospective").

sophisticated actors to anticipate legal changes.²⁴ The introduction of completely random changes to the governing legal regime would render such anticipation impossible.

The answer to the conundrum is constrained randomness that is, another injection of opacity. In a setting of a truly unanticipated retrospective allocation, the participants do not know even that an allocation is afoot. After a time, it is reasonable, and probably desirable, for societal actors to expect that a retrospective allocation scheme is indeed afoot. The key is to keep the precise criteria by which the allocation will be conducted random enough so as to discourage strategic behavioral modification. Consider, for example, the setting of fisheries and the allocation model described above: While one would expect that new IFQ systems might use similar criteria including reliance on historical fishing data to allocate IFQs, one also would expect new IFQ systems to vary the precise historical data on which the criteria would draw. Thus, where one system might rely on the three years immediately preceding the program, another system might rely on the six-year period that ended three years before the program was undertaken. In short, then, two doses of opacity gird retrospective allocation against gaming by societal actors and guard against suboptimally high incentives for actors to engage in environmentally undesirable behavior. First, the government has an incentive not to divulge in advance the precise method by which grandfathering rights will be allocated. Second, the government has an incentive to vary the method it uses from setting to setting, i.e., not predictably to rely upon the same allocation method in multiple settings.

§ 3 – ALLOCATIONS BASED UPON BEHAVIOR THAT IS DESIRABLE TO THE ENVIRONMENT

While opacity is the order of the day where grandfathered rights are to be distributed based on environmentally-*undesirable* behavior, transparency is called for where the behavior by which grandfathered rights are to be distributed is *desirable*. The government properly should have concern over and take steps to minimize incentives for societal actors to engage in suboptimally large amounts of undesirable behavior in order to obtain more grandfathered rights. Opacity aids in that endeavor. In contrast, environmentally desirable behavior is something the government should want to *encourage*. Accordingly, to the extent that it intends to reward that behavior with grandfathered rights, the criteria by which those rights will be distributed should not be concealed, but rather trumpeted.

For example, commentators have observed, and reacted favorably to, governments using tradable credits to induce societal actors to undertake voluntary steps to reduce carbon emissions. On occasion, actors have undertaken voluntary steps even before the

²⁴ See Logue, *supra* note 6, at 213 (arguing that it is reasonable to expect sophisticated actors to anticipate legal changes).

relevant government has implemented the credit program, and indeed even before the precise basis according to which credits will be distributed has been committed to.²⁵ The incentive for the government here is, far from opacity, to craft the credit allocation scheme to in fact reward, as much as possible, desirable behavior previously undertaken by private actors; otherwise, the next time such a program looms, actors will be reluctant to undertake voluntary action in advance to society's detriment lest they

CONCLUSION

In the end, then, governments should be concerned about societal actors gaming the system and engaging in excessive environmentally detrimental behavior in order to capture more grandfathered rights. Accordingly, the government should deploy some degree of opacity in determining how to allocate grandfathered rights based upon behavior that degrades the environment.

In contrast, the government should welcome more behavior that helps the environment; concerns about "gaming the system" abate when the behavior in question is environmentally desirable. Accordingly, transparency should accompany allocations of grandfathered rights based upon environmentally beneficial behavior.

Of course, some allocations are hybrid in nature, grounded in both desirable and undesirable behavior. For example, tradable pollution permits might be distributed to existing polluters based both on (a) the environmentally undesirable measure of the scope of each polluter's prior polluting history, and (b) the environmentally desirable measure of each polluter's energy efficiency. The lessons here would suggest the government employ a mix of opacity and transparency with respect to the undesirable behavior (that is, here, the prior polluting history), and transparency with respect to the desirable behavior (that is, here, energy efficiency).²⁶

²⁵ See Nash, *supra* note 1, at 847.

²⁶ Beyond considerations of behavior that have positive and deleterious effects on the environment, an allocation of grandfathered rights may also take into account concerns of fairness. However, categorizations based upon such fairness concerns will be hard to manipulate. Since gaming the system in such respects would be very difficult, there seems little need to shield this aspect of an allocation regime in opacity.

For example, a tradable fishing quota regime could allocate IFQs not only to owners of boats (as did the example discussed in the text), but also to workers on the boats. See *Alliance Against IFQs v. Brown*, 84 F.3d 343, 348 (9th Cir. 1996) ("Plaintiffs make the sensible argument that a crew member is just as much of a fisherman as a vessel owner."); *id.* at 352 ("Quota shares could have been allocated to all fishermen, instead of to vessel owners and lessees, so that the nonowning fishermen would have something valuable to sell to vessel owners."); see also Nash, *supra* note 1, at 833 (suggesting that "a desire to protect lifestyles and community cohesion," such as what might be found in a community of fishers, might be a valid basis for grandfathering) and to validate norms). Yet, insofar as one's status as an owner or worker is hardly manipulable, "it would not make sense to vary the classes of societal actors--such as owners, lessees, and workers in the fishing quota context--who will be entitled to allocations." Nash, *supra* note 1, at 828 n.76.

As another example, the Kyoto Protocol to the Framework Convention on Climate Change was negotiated in 1997, Eileen Claussen, *Carping at Kyoto*, 34 Geo. Wash. Int'l L. Rev. 247, 248 (2002) (book review of DAVID G. VICTOR, *THE COLLAPSE OF THE KYOTO PROTOCOL AND THE STRUGGLE TO SLOW GLOBAL WARMING* (2001)), and entered into force in 2005, Erik Bluemel, *Unraveling the Global Warming Regime Complex: Competitive Entropy in the Regulation of the Global Public Good*, 155 U. Pa. L. Rev. 1981, 1993 (2007). In

Finally, none of this is to say that grandfathering is overall a normatively desirable outcome. It bears emphasizing again that the arguments here are about how best to structure a grandfathering regime once it has been decided that grandfathering is to take place; they are not arguments in favor of grandfathering itself as a normative matter.

a clear example of retrospective allocation, the Protocol called on developed countries are called on to reduce their greenhouse gas emissions to a percentage of their 1990 emissions levels. *See* Kyoto Protocol to the U.N. Framework Convention on Climate Change, Dec. 10, 1997, U.N. Doc. FCCC/CP/1997/7/Add.1, 2303 U.N.T.S. 148, at Annex, art. 3(1) (entered into force Feb. 16, 2005) (“The Parties included in Annex I shall, individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments inscribed in Annex B and in accordance with the provisions of this Article, with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012.”); *see also* Nash, *supra* note 10, at 508 & n.175. Yet, the percentages applicable for developing nations, such as former members of the Soviet Union and Soviet bloc, were set at more than 100%, perhaps with the intention grounded in fairness of allowing these nations leeway to develop further before having to cut back on emissions. *See* Nash, *supra* note 10, at 522-23. Once again, it would make little sense for treaties going forward randomly to assign percentages among countries; the status of a country as developed or developing is hardly manipulable, and indeed the introduction of randomness would undermine the fairness concerns the varying percentages were designed to address.