Ex Ante/Ex Post

BARBARA H. FRIED*

"No principle of ethics requires that Monte Carlo produce only winners."[1]

I. INTRODUCTION

The problem of legal transitions, put simply, is the problem of whether it is appropriate, for reasons of efficiency or fairness, for the government to offset (through grandfathering, direct compensation or other mechanisms) changes in wealth occasioned by changes in legal regimes. Although this way of putting the matter is evenhanded as between transition winners and losers, in fact commentators have historically limited their concern to the case for compensating losers. That asymmetry, as more recent commentators have noted, is itself a serious problem, a matter to be returned to below.

Since this is a conference to see what lawyers/economists and philosophers might learn from each other, I want to focus on the aspect of the problem that has attracted the interest of both camps: whether we should view the possibility of future change in the legal environment as a risk knowingly undertaken by investors, and if so, what implications that has for the case for undoing the ex post outcome of that bet.

* William and Gertrude Saunders Professor of Law, Stanford Law School. An earlier version of this paper was presented at the Conference on Legal Transitions, Institute for Law and Philosophy, University of San Diego Law School, Oct. 25–26, 2002. I am grateful to participants in that conference, as well as Joe Bankman, Dick Craswell, Mark Kelman, Daryl Levinson, Liam Murphy, and Bill Simon, for comments on an earlier draft.

1. J. Mark Ramseyer & Minoru Nakazato, *Tax Transitions and the Protection Racket: A Reply to Professors Graetz and Kaplow*, 75 VA. L. REV. 1155, 1160 (1989).

The ambitions of the piece are largely descriptive: to figure out what each of these literatures have had to say on the question of ex post compensation for risk, where their analyses have diverged and why. That descriptive account is a first step to figuring out whether these literatures have anything at all to teach each other, or whether their ambitions are simply orthogonal to each other. To anticipate the descriptive story: Over the past twenty years, a substantial literature has emerged in both philosophy and law and economics on the appropriate treatment of risk. While economists have analyzed the case for ex post compensation primarily on welfarist grounds, and philosophers primarily on egalitarian grounds, the two literatures have proceeded along strikingly similar lines, and converged on strikingly similar conclusions, albeit for their very different reasons. This, I think, results straightforwardly from the fact that one dominant strain in the philosophical literature on distributive justice over the past twenty years is a version of egalitarianism—luck egalitarianism—that is committed to the same ex ante perspective as the strong rational expectations model of individual decisionnmaking that has dominated recent welfare analyses of legal transitions. The organizing premise of luck egalitarianism is that a just state would equalize the effects of brute luck on individual endowments, but leave individuals to bear the consequences (good and bad) of their choices. As applied to the problem of choices made under uncertainty (i.e., the problem of risk), that premise has led luck egalitarians to more or less the same conclusion that "rational expectations" economists have reached on welfarist grounds: people should bear the consequences of the risky choices they made (subject in both cases to some exceptions where insurance against a chosen risk is desired but unavailable).

In the past few years, a dissenting literature has emerged in philosophy. It has offered both an external critique of the foundational premise of luck egalitarianism that people should be stuck with the consequences of their choices, and an internal critique that pushes on the practical and moral difficulties of administering a distributive scheme organized on the distinction between choice and brute luck. As far as I know, no similar dissenting literature has emerged within mainstream law and economics. Indeed, judging at least from the most recent significant contribution to the economic analysis of transitions, Daniel Shaviro's *When Rules Change*,[2] the trend seems to be toward greater self-confidence that, at least in the case of transitions in legal regimes, the market can usually deliver what justice requires. Strong cautionary

2. DANIEL SHAVIRO, WHEN RULES CHANGE: AN ECONOMIC AND POLITICAL ANALYSIS OF TRANSITION RELIEF AND RETROACTIVITY (2000).

notes, however, have been sounded by the now voluminous behavioral economics literature on systematic violations of expected utility theory in decisionmaking under uncertainty. Together, these two dissenting literatures pose some very significant challenges to the sanctity of ex ante choice that underlies luck egalitarianism and the now dominant rational expectations perspective of welfarism. After describing the conventional ex ante treatment of risk in economics and luck egalitarian philosophy, I want to return to whether those challenges deserve to be taken more seriously than they have been in assessing the case for ex post compensation for ex ante risk.

A. Law and Economics Perspective on the Problem of Legal Transition

In broad outline, the development of thought on the appropriate treatment of legal transitions in the law and economics literature might be described as follows. Prior to the mid-1970s, the legal literature exhibited a general bias in favor of ex post compensation for the loser. That bias reflected, I think, an often unexamined assumption that people had a right to (and did) expect legal stability when they made long-term investment decisions, and hence that any significant change in legal regimes constituted unfair surprise, the ex post (negative) consequences of which they were entitled to be protected against. It reflected as well an implicit (and probably unconscious) decision to ignore the symmetrical problem of transition winners, with the consequence that transition gains simply lay where they fell, by default. Outside of the legal academy, the scant literature on the topic leaned towards the same pro-compensation position for losers, on the same or similar grounds.[3]

All of that changed starting in the 1970s. In a series of articles in the takings and tax contexts, scholars rejected the conventional view of legal transitions as presenting a problem of unfair (ex post) surprise. Rather, they argued, it should be viewed as just an instance of the more general problem of decision-making under uncertainty.[4] Viewed from that

3. *See, e.g.*, Harold M. Hochman, *Rule Change and Transitional Equity, in* REDISTRIBUTION THROUGH PUBLIC CHOICE 322 (Harold M. Hochman & George E. Peterson eds., 1973) ("[Transitional equity's] concern is with entitlements to certainty that pre-existing rights and endowments sanctioned by a social contract will continue undiminished"); Martin Feldstein, *On the Theory of Tax Reform*, 6 J. PUB. ECON. 77 (1976).

4. In the takings contexts, the key works are Frank Michelman's seminal 1967 article, *Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just*

perspective, the risk that a future change in government policy will reduce the value of previously committed capital is just one of myriad risks that a would-be investor faces. As with all such risks, we should assume that the investor has rationally calculated the upside and downside costs of that risk, discounted by the probability of occurrence, in assessing the expected value of such investment. If the investor chooses to go ahead in the face of such known risks, she is taking a knowing (ex ante) gamble. The ex post results of that gamble, rather than reflecting a random thunderbolt from the sky (to borrow Dan Shaviro's phrase), instead thus reflect just one of the expected payoffs of a risky bet come home to roost. Moreover, any analysis of the case for ex post compensation would have to account for transition gains as well as losses—a shift from the historically one-sided perspective on the issue, and one that was likely to dim the enthusiasm of ex post compensation types.

This shift, from viewing the ex post costs (benefits) of legal transitions as an unanticipated windfall, to viewing them as the payoff of an ex ante rational bet, has had enormous implications for what law and economics scholars take to be the appropriate policy response. The chief conclusions are summarized below. (For ease of exposition, the summary focuses on the case for ex post compensation of *losses*, ignoring the gain side. For the most part, the same conclusions would hold on the gain side as well.)

1. *There is nothing distinct about the problem of legal transitions from a policy perspective.* Legal transitions represent just one of a myriad of uncertainties that face investors. The question of how to respond to them is just an instance of the larger question how (if at all) the government ought to intervene in private decision-making under uncertainty.

2. *Ex post compensation is generally undesirable, on both fairness and efficiency grounds.* The fairness argument here is straightforward. In Dan Shaviro's words, the case for compensation on equity grounds

---

Compensation" Law, 80 HARV. L. REV. 1165 (1967), which foreshadowed many of themes subsequently formalized in more explicitly economic treatments of the subject, and Lawrence Blume & Daniel L. Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 CAL. L. REV. 569 (1984). (For an attempt to show that once one eliminates semantic differences in terminology, Michelman's argument lines up very closely to the (now conventional) law and economics treatment of the subject, *see* William A. Fischel & Perry Shapiro, *Takings, Insurance and Michelman: Comments on Economic Interpretations of 'Just Compensation' Law*, 17 J. OF LEGAL STUD. 269 (1988)). The early key works focusing in part or exclusively on tax include Michael J. Graetz, *Legal Transitions: The Case of Retroactivity in Income Tax Revision*, 126 U. PA. L. REV. 47 (1977) [hereinafter *Legal Transitions*]; Michael J. Graetz, *Retroactivity Revisited*, 98 HARV. L. REV. 1820 (1985) [hereinafter *Retroactivity Revisited*]; Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509 (1986).

disappears if we assume that (1) "any decision with long-term consequences is at least an implicit bet about the future"; and (2) people are responsible for the consequences of their deliberate risk-bearing.[5] Or, as Ramseyer and Nakazato put it, in the quote cited at the outset of the paper: "No principle of ethics requires that Monte Carlo produce only winners."[6] Shaviro takes the argument even further, concluding that if we assume (as a rational expectations model would require us to assume) that the (downside) risks of transition loss are foreseen and hence impounded in the price of an investment, investors have already been compensated for that downside risk ex ante through a lower purchase price. If we compensate them ex post, we are therefore doubly compensating them for the same risk.[7]

The argument against compensation on efficiency grounds is equally straightforward. If the government *precommits* to a policy of ex post compensation for transitions losses (without taxing away transitions gains), that precommitment increases the expected private return to investment, since private investors anticipate being able to externalize some of the costs of their bet on the government. The effect of increasing the expected return in that fashion is to drive a wedge between private and social returns to investment, thereby creating a private incentive to invest even when the expected social return is negative.[8] The welfarist costs of such a precommitment policy will be magnified going forward, as the knowledge that the government provided relief in one case will increase the expectation that it will provide it in like cases in the future,

---

5. SHAVIRO, *supra* note 2, at 18.

6. Ramseyer & Nakazato, *supra* note 1, at 1160. For similar sentiments, see RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 8 (5th ed., 1998) ("If regret is allowed to undo decisions, the ability of people to shape their destinies is impaired."); *Retroactivity Revisited*, *supra* note 4, at 1834–35.

7. I think this last step of the argument doesn't quite go through, for reasons discussed at greater length below. In brief, the downside risk is impounded in the ex ante price only on a discounted basis (that is, discounted for the probability of loss). As a consequence, the actual ex post loss an investor experiences when that probability, always less than 1.0, becomes a certainty, is always greater than the ex ante discount. Second, under a strong rational expectations model, one would have to assume that investors foresee not only the probability of transition loss, but also the probability of ex post compensation from the government. The latter will offset the former if the expected compensation is equal to 100 percent of the expected loss, yielding no discount in the initial price of the investment, and hence no double-counting.

8. Kaplow, *supra* note 4, at 529–31, 535; SHAVIRO, *supra* note 2, at 47–53; Blume & Rubinfeld, *supra* note 4, at 618–19.

even absent a precommitment, distorting all future decision-making as a consequence.

If the government doesn't precommit to transition relief but instead grants it retroactively, that retroactive decision in any individual case will, to a first approximation, have exactly the same welfarist consequences as a precommitted policy of transition relief. Unlike a precommitted policy, it is true, retroactive relief operates as a lump-sum transfer with respect to the particular set of investors affected by it, as their investment decisions have already been sunk at the time retroactive relief is provided. (Note that this is true whether or not those investors expected retroactive relief—in either case, their investment decision was governed by their expectations, not by the government's actual, ex post actions.) That opens the possibility that the government could generate significant welfare gains (via lump-sum taxes and/or lump-sum transfers) through imposition of a one-time transition gain or loss. Indeed, this possibility is capitalized on in the welfarist case for a transition to a consumption tax.[9] But with respect to the universe of all future investors, a retroactively applied policy should have the same welfare costs as a precommitted one, by creating the rational expectation that what the government has done once (bail out investors) it will do again. Those costs have to be weighed against any gains from the lump-sum character of the treatment of past investors.[10] In theory, the government could eliminate the distortive effects of any given transition relief on future transactions if it could credibly commit not to repeat the action. Alas, it cannot (see Shaviro).

9. *See* Alan J. Auerbach, et al., *Simulating Fundamental Tax Reform in the U.S.*, 26–29 (Sept. 1999), *at* http://emlab.berkeley.edu/users/auerbach; Joseph Bankman & Barbara H. Fried, *Winners and Losers in the Shift to a Consumption Tax*, 86 GEO. L.J. 539, 565–68 (1998). As Shaviro notes, the welfare gains in this case come from an accounting change (wiping out pre-change basis) rather than a policy change applied retroactively. SHAVIRO, *supra* note 2, at 61.

10. One strong implication of Shaviro's thoughtful analysis is that the former costs will almost always dominate the latter gains. Perhaps some greater caution is in order here. The welfare gains of transition relief are certain (in the sense of not probabilistic). In contrast, the welfare costs going forward depend on how much that action is perceived to increase the odds of like relief in the future, over what category of "like" legal changes, and for how long in the future. As discussed below, there is immense uncertainty surrounding all of these questions. As a consequence, one cannot discount the possibility that as to any particular retroactive change, the welfare gains from a lump-sum tax or transfer will outweigh the welfare loss from slightly increased perceived odds of like "retroactive" bailouts/taxes in the future. Or so I imagine Auerbach et al., *supra* note 9, might respond to Shaviro here.

The foregoing argument against bailing investors out of ex post losses from legal change holds whether the legal change in question is a good one or not from a public policy perspective. Good or bad, if it is inevitable, investing resources that will be lost in the event of change is inefficient, and hence forcing investors to internalize the cost of that risk is efficient. Graetz added a further argument in favor of no compensation on efficiency grounds that holds only if the legal change is in fact a good one. By forcing individuals to bear the costs of change, we give them an incentive to anticipate it in their decision-making, which accelerates the effective date of change. If we assume that legal change is generally in the direction of better rather than worse policy, moving up the effective date of change is therefore (all other things being equal) desirable in and of itself.[11]

---

11. *Legal Transitions, supra* note 4, at 65. The foregoing analysis of the welfarist effects attends solely to the effects of compensation policy on individual investors' decisions. As many commentators have noted over the years, there is another factor that a full-blown welfarist analysis ought to take into account: maximizing the government's incentives to adopt policy changes that are in the "public interest," meaning for these purposes that generate net welfare gains. In the takings context, that line of thought has led some economists to argue that while compensation generally creates bad incentives for investors, it may well create optimal ones for governments, by forcing them to internalize the private costs of policy changes in assessing whether there is a net social benefit to such change; and that perhaps the optimal solution, given these two contrary effects, is to decouple what the government pays from what the investor receives. *See* POSNER, *supra* note 6, at 64; Blume & Rubinfeld, *supra* note 4, at 571. *See generally* Daryl J. Levinson, *Making Government Pay: Markets, Politics, and the Allocation of Constitutional Costs*, 67 U. CHI. L. REV. 345 (2000). For parallel arguments in the areas of tort and contracts, suggesting that optimal damage schemes will have to trade off optimal incentives on the victim's/nonbreacher's side (which argue for no compensation) against optimal incentives on the tortfeasor's/breachers' side (which argue for some compensation), see generally Robert Cooter, *Unity in Tort, Contract, and Property: The Model of Precaution*, 73 CAL. L. REV. 1, 3–18 (1985). Whatever the merits of that argument in the takings context, it may not translate well to other transitions contexts like tax reform, where not only the costs, but many of the benefits of the change in law as well, are privately captured.

As Louis Kaplow suggests, Louis Kaplow, *Transition Policy: A Conceptual Framework*, 13 J. CONTEMP. LEGAL ISSUES 161 (2003), coming up with some rough design for trading off optimal incentives on the government side with optimal incentives on the individual investor side requires a theory of political economy to predict government behavior. In the absence of such a theory, most transitions analysis at least in the tax context has simply ignored the government side of the picture, focusing on the supposed effects of compensation on individual investor behavior. For the balance of this piece, I will do the same.

3. *Compensation may, however, be warranted as a form of implicit insurance if investors would have preferred to insure against transition risk but the market cannot provide it.* The foregoing, essentially rational choice/consumer sovereignty, argument for sticking individuals with the ex post consequences of their ex ante choices has been subject to one important qualification. The argument makes no distinction between choices under conditions of certainty, and those under conditions of uncertainty. As numerous commentators have noted, decision-making under uncertainty poses an additional complication that might argue for government intervention—not to change the expected value of the investment, but to eliminate the variance (risk). In the case of Monte Carlo, individuals choose to bear the risk of a gamble—indeed, taking that risk is the sole motive for being there, as gamblers could costlessly swap the expected value of that bet for a certain return of (generally) higher value just by staying home. In contrast, in the case of conventional investments in land, securities, etc., investors would often prefer to avoid the risk of legal change entirely, even if the expected value of legal change is zero (i.e., advantageous and disadvantageous changes are equiprobable) or even positive. When investors cannot lay off that risk through private insurance or self-insurance via a diversified portfolio, the government may be able to increase overall welfare by acting as an insurer, via grandfathering or other forms of implicit or explicit compensation.[12] While therefore theoretically possible that government intervention could improve welfare, scholars have been skeptical as an empirical matter how often this will be the case, given the relatively low magnitude of potential welfare losses from many unwanted and otherwise unavoidable risks of government change, on the one side, and the relatively high transactions costs, moral hazard problems, etc., presented by government intervention on the other side. While economists and fellow travelers were mostly interested in

12. Note that if investors must pay for insurance, whether obtained through the private market or through the government, insurance does not obviate the wealth transfer implicit in legal changes, in cases in which the expected value of such changes at the time insurance is obtained is negative. (This would always be the case in the takings context, often in tax reform.) In such cases, the expected (negative) value is priced into the insurance premium. While insurance will eliminate the variance associated with that loss, it thus will not reduce the mean expected loss. The fact that the expected loss may be priced into the asset at time of purchase doesn't change this fundamental point. As discussed below, it merely indicates that the expected loss may have to be borne by the prior holder, rather than the current one. *See* Blume & Rubinfeld, *supra* note 4, at 590–92; Fischel & Shapiro, *supra* note 4, at 287–91. Of course, this analysis could change if investors hedge that expected loss through other investments, or if (somewhat more implausibly) investors are getting offsetting, in-kind compensation from the lower tax rates permitted by a no-compensation rule. On the latter point, *see* Daniel A. Farber, *Public Choice and Just Compensation*, 9 CONST. COMMENT. 279 (1992).

possible efficiency gains from providing a mechanism for investors to insure against unwanted risk, it is not hard to anticipate the fairness analogue to the argument: To wit, when investors choose an investment that comes bundled with a risk that they would prefer not to shoulder, but cannot shed except by declining to invest at all, they have not "chosen" that risk in the same sense that they might have "chosen" to make the underlying investment itself, or that gamblers "choose" to take their chances at Monte Carlo.

B. Philosophical Perspective on the Problem of Risk

During roughly the same period that the problem of legal change was being recast in legal and economic circles as a problem of ex ante choice under uncertainty rather than ex post bad luck, a parallel literature emerged in the egalitarian camp of political philosophy, leading to much the same conclusions, albeit on fairness rather than efficiency grounds: People should generally be stuck with the ex post consequences of their ex ante choices, whether made under conditions of uncertainty or not. While the philosophical literature has had little to say on the specific problem of legal transitions, its general argument for sticking people with the ex post consequences of their risky choices would cover that case, along with all other instances of decision-making under uncertainty.

The shift to an ex ante perspective began with Ronald Dworkin's famous 1981 article on equality of resources.[13] In brief, Dworkin argued that what egalitarians ought to care about is not equalizing ex post outcomes (whether measured by welfare, Rawlsian primary goods, or some other metric), but instead ex ante opportunities, measured by the resources available to individuals to further their life plans. The just state, Dworkin argued, is obliged to redistribute resources to compensate individuals for any inequalities in their background resources (differences in natural ability, inheritance, claims on external social resources, etc.). After it has done so, individuals should be left (for better and worse) to

13. Ronald Dworkin, *What is Equality? Part 2: Equality of Resources*, 10 PHIL. & PUB. AFF. 283 (1981), [hereinafter *Equality of Resources*]. As John Roemer has argued, the notion that we are responsible for our choices appeared in embryonic form in both John Rawls's and Amartya Sen's earlier work, but Dworkin's account unambiguously moved it to center stage. JOHN E. ROEMER, THEORIES OF DISTRIBUTIVE JUSTICE 246 (1996). It was also anticipated in a more general way, it seems fair to say, by the emphasis on "equal opportunity" in broader political debate over public policy beginning in the 1960s.

the consequences of whatever choices they make from such a position of ex ante equality.[14]

In the twenty years since Dworkin's article, various alternative versions of "equal opportunity" egalitarianism have been put forth by Richard Arneson, G.A. Cohen, Michael Otsuka, John Roemer, Eric Rakowski, Amartya Sen, and Peter Vallentyne, among others.[15] These proposals differ in a number of key respects, among them whether our aim should be complete equality, partial equality, or simply priority of the worst off, and whether we should seek to equalize the value of the extended bundle of resources at individuals' disposal (Dworkin, Rakowski, and more ambiguously Roemer, Ackerman, Vallentyne), or should instead equalize the opportunity to achieve certain outcome levels (Sen, Arneson, G.A. Cohen, and sometimes Roemer).[16] (The two measures will diverge when people have differing capacities, through no fault of their own, to convert resources to welfare or any other measure of outcomes that we care about.) For present purposes, however, these internecine disputes among ex ante egalitarians can be set aside. What is critical is the premise that they all share—to wit, that people's claims against the state are limited to those differences in their opportunity sets for which they are not responsible. Any differences in their life situations that are the consequences of different choices made from identical opportunity sets are their responsibility.

---

14. Dworkin adopts different mechanisms for equalizing talents and external resources, which mechanisms imply different degrees of equality. I'm not sure those distinctions make sense within the context of his broader argument, but for current purposes they can be set aside.

15. *See* Richard J. Arneson, *Liberalism, Distributive Subjectivism, and Equal Opportunity for Welfare*, 19 PHIL. & PUB. AFF. 158 (1990) [hereinafter *Liberalism*]; Richard J. Arneson, *Equality and Equal Opportunity for Welfare*, 56 PHIL. STUD. 77 (1989) [hereinafter *Equality and Equal Opportunity*]; Richard J. Arneson, *Luck Egalitarianism and Prioritarianism*, 110 ETHICS 339 (2000) [hereinafter *Luck Egalitarianism*]; G.A. Cohen, *On the Currency of Egalitarian Justice*, 99 ETHICS 906 (1989); Michael Otsuka, *Luck, Insurance, and Equality*, 113 ETHICS 40 (2002); Amartya Sen, *Equality of What?*, *reprinted in* AMARTYA SEN, CHOICE, WELFARE AND MEASUREMENT 353 (1982); ERIC RAKOWSKI, EQUAL JUSTICE (1991); John E. Roemer, *A Pragmatic Theory for the Egalitarian Planner*, 22 PHIL. & PUB. AFF. 146 (1993); Peter Vallentyne, *Brute Luck, Option Luck, and Equality of Initial Opportunities*, 112 ETHICS 529 (2002).

16. *See* Arneson, *Equality and Equal Opportunity*, *supra* note 15, at 88 (arguing for equal opportunity for welfare); Cohen, *supra* note 15, at 907 (arguing for equal access to advantage, with welfare a subset of advantage); Sen, *supra* note 15, at 367 (arguing for equality of capability, meaning, roughly, the ability to do certain basic things in life). For very useful taxonomies of ex ante egalitarians, *see* Marc Fleurbaey, *Equal Opportunity or Equal Social Outcome*, 11 ECON. & PHIL. 25, 27 (1995); ROEMER, *supra* note 13, at 237–315.

Dworkin himself took the fundamental divide between what the state was and was not responsible for equalizing to be resources (yes) versus preferences (no, as long as one is glad to have those preferences). Choice was critical in Dworkin's account only by virtue of the fact that it was the mechanism by which people acted on their preferences.[17] Subsequent versions of choice egalitarianism have construed the fundamental divide to be between those things that an individual cannot control (the state has some obligations to equalize) and those that an individual can control (the state has no obligations to equalize). In that account, choice is morally foundational. As G.A. Cohen put it, speaking for the latter, more numerous wing, of choice egalitarianism: "[T]he right reading of egalitarianism . . . is to eliminate involuntary disadvantage, by which I (stipulatively) mean disadvantage for which the sufferer cannot be made responsible, since it does not appropriately reflect choices that he has made or is making or would make."[18]

Like welfarists, choice egalitarians assumed, as a first approximation, that we should draw no distinction in this regard between choices under conditions of certainty and those under conditions of uncertainty. Dworkin captured that view in his well-known distinction between "option luck" and "brute luck". The proper object of egalitarian concern, Dworkin argued, is what he termed "brute luck," by which he meant all the "thunderbolt from the sky" things that happen to people to leave them in better or worse positions than their fellow citizens. This includes, of course, differential initial resources (talents, inheritance, land, etc.). It includes as well the good or bad things that happened to people throughout their lives as a matter of chance rather than choice. The latter group, Dworkin argued, should *not* include "option luck," meaning variance in ex post payoffs to knowing gambles (risky choices). If the ex ante gamble was chosen, so also were the foreseeable, ex post, consequences of that gamble, for better or for worse. In Dworkin's words, "the possibility of loss was part of the life they chose—it was the fair price of the possibility of gain."[19]

---

17. Cohen, *supra* note 15, at 933, has argued, persuasively in my view, that Dworkin himself is a "choice egalitarian" manque, on the ground that all of the morally attractive features of Dworkin's argument come from the implicit coincidence of "ambitions" (what he professes to care about foundationally) with that which we can control (which he professes to care about only derivatively).

18. *Id.* at 916.

19. Dworkin, *supra* note 13, at 294.

Like welfarists, however, luck egalitarians saw from the start that insurance played a critical mediating role in determining what was chosen and what not in the case of decisions under uncertainty. As Dworkin observed, the availability of insurance turns what would otherwise be brute luck into option luck, by giving individuals a mechanism to avoid the risk of brute luck entirely.[20] The availability of insurance against such disasters may not eliminate all brute luck differences in fortune. If individuals face a different *known* level of brute-luck risk due to factors beyond their control, and as a consequence face differential insurance premia, ex ante egalitarian principles would mandate redistributing resources to offset such differences in premia. But any losses beyond such differentials in premia, which losses result from the decision not to insure, are subsumed under choice, and hence the responsibility of the individual.

Dworkin and subsequent writers have observed as well the mediating role insurance plays in the other direction: turning option luck into brute luck. To the extent a risk was unavoidable because uninsurable, and bundled in with other choices it would have been prudent to make even at the cost of unwanted risk, the absence of insurance converts what would otherwise have been option luck into brute luck. In such cases, there is a luck-egalitarian case for the state to step in, ex post, to bail people out of the bad consequences of their risky choices.[21] This is, of course, just the standard welfarist argument for limited ex post mercy in the case of uninsurable risk, decked out in fairness rather than welfarist garb.

And so we arrive at the assertion with which I started: that conventional law and economics analyses and luck egalitarianism have converged on the same broad prescription, albeit for very different reasons: The state generally ought not to undo the ex post consequences of ex ante risky choices. An exception to this general rule might be called for in those cases in which it could be shown that the risk borne was unwanted and unavoidable (uninsurable).

Notwithstanding this broad convergence, one would expect the welfarist and luck egalitarian prescriptions to diverge in particular cases, as a consequence of the fact that the incentive-driven welfarist perspective is forward-looking, and the luck-egalitarian position largely backward-looking. So, for example, in cases in which ex post compensation for bad option luck is predicted to have no incentive effects on future choices (because, for example, the state can credibly commit to a one-

20. *Id.* at 297. For other discussions of the role that insurance plays in converting brute luck to option luck, *see* Kasper Lippert-Rasmussen, *Egalitarianism, Option Luck, and Responsibility*, 111 ETHICS 548, 556 (2001); RAKOWSKI, *supra* note 15, at 80–81.

21. Dworkin, *supra* note 13, at 297; *see also* Fleurbaey, *supra* note 16, at 41–43; Otsuka, *supra* note 15, at 46.

shot compensation), the lump-sum nature of the transfer makes the welfarist indifferent to ex post compensation, except insofar as it may affect overall welfare due to wealth differences in the transferor and transferee groups. The luck egalitarian, on the other hand, remains committed to an anti-compensation position on desert grounds.[22] (One important lesson of Shaviro's book is that such cases may be rarer than we think—although I suspect not quite as rare as he thinks.) So also, on the other side, in cases of risks that could not reasonably have been foreseen the first time, but having occurred once can be foreseen to recur, the case for ex post compensation for that first set of blindsided investors will look much stronger on luck egalitarian than welfarist grounds. There are undoubtedly other differences as well, reflecting the different weights luck egalitarians and welfarists would give to transactions costs, etc., in evaluating the case for compensation.

But setting these relatively small differences aside, the two camps seem to have arrived at pretty much the same place, with (as far as I know) little or no awareness of each other. Why this should be so is itself an interesting question of intellectual history. One possible answer, of course, is that both sides have simply hit on the ineluctable truth in their respective disciplines (people should be stuck with the consequences of their ex ante choices), and it is a matter of sheer coincidence that the same (true) answers obtain for very different questions. I'm inclined to resist that explanation, in favor of some more sociological account. Be that as it may, we find ourselves at a pass where the rational expectations model of human behavior, enshrined in a strong ex ante perspective, is king in economics and moral philosophy respectively.

Putting choice in moralistic terms—as luck egalitarianism did—inevitably invited close scrutiny about the quality of ex ante choice in most real-world situations, and whether it was the sort of "genuine choice" (in G.A. Cohen's words) that could justify moral or political indifference to ex post losers (that is, an anti-compensation rule).[23] In the last few years, the question has been a hot one in philosophical circles, occasioning a number of very thoughtful critiques.[24] As far as I

22. See, for example, Arneson's modification of his hiker responsibility example, meant to shear off fairness considerations from incentive effects on future park visitors with respect to taking precautions, by supposing that "the park is about to be shut down and [hence] there are no such incentive effects to consider." Arneson, *Luck Egalitarianism*, *supra* note 15, at 348.

23. Cohen, *supra* note 15, at 934.

24. *See* Elizabeth S. Anderson, *What is the Point of Equality?*, 109 ETHICS 287

know, there is no comparable, skeptical, literature within conventional economics. Economics has tended to subsume these questions under the broader category of attacks on the rationality of individual decision-making. The standard (perfectly sensible, as far as it goes) response to all such attacks has been: However imperfect individual choice is as an expression of informed and stable preferences, it is probably better than the alternatives. At any rate, the burden is on skeptics to show (1) the presence of systematic irrationalities in individual decision-making that (2) the government is capable of bettering at some tolerable cost. There is now, of course, a substantial literature in behavioral economics and psychology taking on the first of these two questions in the context of decision-making in the face of risk and uncertainty.

In what follows, I want to put on the table the most serious challenges to the strong ex ante view. Some are unique to choice in the face of uncertainty (the situation posed by transition risk). Some would apply to choice in the face of risk or certainty as well. Most of these challenges can be accommodated *theoretically* within a welfarist framework. That is to say, welfarism's commitment to ex anteism in this context is not foundational, but merely contingent on an empirical hunch that a quasi-strong version of rational expectations accurately captures human psychology, and, as a consequence, that the welfare costs of distorting ex ante incentives through ex post compensation are likely to swamp all other welfarist considerations in the treatment of risk.[25] Thus, the challenges posed below are, for welfarism, largely empirical ones (e.g., when are ex ante preferences so unstable or ill-informed that we ought to override them on welfarist grounds; when are the welfare gains from ex post compensation of losers, given the declining marginal utility of money, likely to outweigh the welfare costs of distorting decision-making by ex post compensation). Many of these problems have been acknowledged at least in passing in the recent welfarist literature, as

(1999); Lippert-Rasmussen, *supra* note 20; Fleurbaey, *supra* note 16; Marc Fleurbaey, *Egalitarian Opportunities*, 20 LAW & PHIL. 499 (2001); Jonathan Wolff, *Fairness, Respect, and the Egalitarian Ethos*, 27 PHIL. & PUB. AFF. 97 (1998). For my own, more tentative, discussion of the problems with implementing luck egalitarianism in the tax context, *see* Barbara H. Fried, *Compared to What? Taxing Brute Luck and Other Second-Best Problems*, 53 TAX L. REV. 377 (2000).

25. Ultimately, choice-based welfarism cannot survive without some strong version of ex ante rationality. After all, if people's choices are merely random with respect to their welfare, or, worse still, negatively correlated, there would be no welfarist reason to care about choice at all. To that extent, ex anteism is foundational to all preference-based versions of welfarism. But one could probably concede the at best weak rationality of choice in certain arenas (decision-making under uncertainty, decision-making over a long time horizon, etc.) without giving up on preference-based welfarism entirely.

potential limitations to the ex ante perspective that a full-blown welfarist account of decision-making under uncertainty would have to weigh. My own provisional sense is that some of them deserve more weight than they have gotten, and, if taken more seriously, are likely to drive welfarists away from their strong, if empirically contingent, commitment to an ex ante perspective at least in some contexts.

In contrast, a commitment to ex anteism is foundational to luck egalitarianism. As a consequence, the problems inherent in a strong ex ante view pose deeper theoretical challenges to it. Writers signing on to some version of luck egalitarianism have anticipated many of these difficulties, but remain optimistic that they can be accommodated by refining the definition of what risks are meaningfully chosen, or by recognizing that moral responsibility for choice (and hence the case for compensating bad consequences of choice) lies on a continuum.[26] While there is not room to explore that hope adequately here, I am somewhat less sanguine that such refinements are possible, or—were they possible—that much would be left at the end of the day of luck egalitarianism as a distinctive strand of egalitarian thought.

II. Limits to the Ex Ante Perspective

A. *Is the World a Casino?*

The reigning metaphor in the philosophical and economics literature for explicating and defending the ex ante perspective is the gambling casino.[27] Even within the confines of the gambling casino, there are well-known problems with the "individual rationality" assumption on which the ex ante perspective rests. But the problems become a lot more serious when one steps out of the artifice of the gambling hall and into the real world of decision-making under uncertainty. The differences in the nature of risk-taking in such uncontrolled contexts suggest that one's moral or empirical intuitions about the appropriate treatment of gamblers at Monte Carlo may not translate well to other contexts of decision-making under uncertainty.

26. On the latter point, see Cohen, *supra* note 15, at 934; Arneson, *Luck Egalitarianism*, *supra* note 15, at 344.

27. Dworkin, *supra* note 13, at 293–95; Arneson, *Liberalism*, *supra* note 15, at 176; Arneson, *Equality and Equality of Opportunity*, *supra* note 15, at 83–84; Cohen, *supra* note 15, at 916; Ramseyer & Nakazato, *supra* note 1, at 1160; SHAVIRO, *supra* note 2, at 18.

As against the conventional view that the case for ex post compensation for risk is adequately disposed of by the observation that "No principle of ethics requires that Monte Carlo produce only winners," consider Marc Fleurbaey's exemplary tale of one devil-may-care Bert.[28] Bert has been brought up with all the privileges of life, but has "freely adopted [with whatever notion of freedom would satisfy one here] a negligent and reckless character. In particular, he enjoys having his hair blown by the wind when he rides his motorbike on the highway, and he seldom wears a helmet even though he has one and it is compulsory to wear it."[29] On the morning when he is, inevitably, about to lose his gamble, Bert spurns his mother's warnings about the helmet, saying "I prefer to take the risk and enjoy the wind." He ends up in an accident that leaves him with serious injuries that will cause death unless he has a costly operation, which operation he cannot afford because he has no health insurance.

As Fleurbaey correctly notes, the luck egalitarian would rule out any transfer of resources to Bert to pay for the operation, since the ex post outcome was one foreseeable consequence of his actions, and he could have taken precautions against it.[30] Since the bad outcome is due to factors that lie within Bert's control, to the luck egalitarian "any [ex post] inequality" in Bert's welfare as compared to others' will be (to quote Arneson) "nonproblematic from the standpoint of distributive

28. Fleurbaey, *supra* note 16, at 41–44.

29. *Id.* at 40. It doesn't matter for Fleurbaey's larger point here, but I'm uncertain why the legality or illegality of helmetless riding is relevant here. Surely the equal opportunity perspective of luck egalitarianism will stick Bert with the unhappy end he is about to meet in this morality tale, whether his choice of helmetless driving is legal or not. Perhaps the thought here is just that the illegality of the choice should have concentrated his mind wonderfully on its danger, even if nothing else had.

30. *Id.* at 41, citing to Arneson, *Equality and Equal Opportunity*, *supra* note 15, at 86. It is unclear what the relevant precaution is in this example. Fleurbaey seems to have in mind wearing a helmet, but of course that might not have sufficed to prevent the injury. Even if it wouldn't—as it often will not on a motorcycle—all motorcycle riders have another precautionary measure available to them that will work even better than helmets: not riding motorcycles. That possibility opens up a problem with the ex ante perspective dealt with below: what sorts of precautions is it reasonable to expect people to take, such that if they fail to take them, "they are rightly deemed personally responsible" for the consequences of their negligent behavior. Arneson, *supra* note 15, at 86.

Alternatively, we could treat the failure to insure as the relevant failure to take precautions. If so, most of the rest of the facts in Fleurbaey's example become irrelevant: The ex ante types would still stick Bert with the costs of this accident, even if he were the most cautious, prudent motorcycle rider in the world, and motorcycle riding itself were not an ultrahazardous activity, since, by insuring, he could have avoided the financial disaster associated with the (now prudent) physical risks he took.

equality."[31] To this, Fleurbaey responds: "I hope Bert's example will make it clear how the word 'any' can be frightening in the last sentence. If you freely and deliberately make the slightest mistake that can put you in a very hazardous situation, a society complying with equal opportunity will quietly let you die."[32]

This is a deliberately arresting example, and it bears noting at the start that it may be trading on moral intuitions and emotional responses that do not carry over to less extreme ex post losses of the sort that will generally be at stake in legal transitions. I will return to that question at the end. But for now, I want to focus on Fleurbaey's intuition that the example of Bert makes luck egalitarianism "looks rather primitive," and the contrary intuition of justice he offers in its stead: that "however . . .stupid [Bert's] behavior may have been, there is a limit to the kind and amount of suffering he should endure.[33] If—as I suspect—most people share that intuition, the question is, why? What is different about Bert's situation from the plight of the losing gambler in Monte Carlo, besides the obvious and very important difference in the severity of their ex post plights? Do the run-of-the-mill risks we take in life look more like Bert or the gambler? And what if any qualifications to ex ante justice are suggested by Bert's plight?

---

31. *Id.* at 86. For similar views, throwing the Berts of the world to the wolves, see RAKOWSKI, *supra* note 15, at 79 ("People who leap from airplanes, scale cliffs, or whirl around racetracks knowingly take their lives in their own hands and cannot expect others to foot their hospital bills or aid their dependents if fortune is uncharitable.") While the Berts of the world who are engaged in ultrahazardous activities are (in Rakowski's view) an exemplary instance of people who should not come crying to the state if risky choices don't work out as they hoped, he appears willing to impose the same fate on anyone who takes any risk, however longshot, that he could have avoided by an alternative choice.

32. Fleurbaey, *supra* note 16, at 40. I should note that Arneson, prompted in part (or so he reported in a conversation) by Fleurbaey's example of Bert, has since modified his position in favor of a softer version of ex anteism, which he calls "responsibility-catering prioritarianism." *See* Arneson, *Luck Egalitarianism*, *supra* note 15, at 340.

33. Elizabeth S. Anderson has registered her unhappiness in even stronger terms, suggesting that luck egalitarianism reflects the contemptuous, mean-spirited moralism of 19th century laissez-faire capitalism, in moralistically contrasting the responsible and the irresponsible, offering no aid to those it labels irresponsible, and "humiliating aid" in an updated version of the Poor Laws to those it labels innately inferior and hence not capable of making prudent choices. *See* Anderson, *supra* note 24, at 308, 311. *See also* Fleurbaey, *supra* note 16, tying what he sees to be the essentially conservative commitments of luck egalitarianism to the libertarian, personal responsibility ethos of our times.

1. The Foreseeability of Risk

A prerequisite to holding individuals to the consequences of their choices, on either welfarist or fairness grounds, is that they be able to foresee those consequences, on a certain or probabilistic basis. From a luck egalitarian perspective, if they could not reasonably foresee them, then it is hard to see on what moralistic basis we would want to hold them responsible for them. A similar argument obtains in the welfarist context: If people cannot foresee certain adverse consequences of their actions at all, they are unlikely to respond to policies that increase or decrease their financial responsibility for those adverse consequences.

Pushed to its logical extreme, the ex ante perspective assumes that every bad (and good) thing that could factually result from a choice at any time in the future is foreseeable and foreseen at the moment of choice, and impounded in the price of that choice on day one. That assumption seems perfectly justified, at least as to foreseeability, in the case of the gambler at Monte Carlo. There is not the slightest doubt that the typical gambler understands that he is exposing himself to the risk of losing his wagered capital, in return for the upside possibility of winning—that is the whole point of his being there. While he may systematically misassess the odds of winning or losing, those odds are objectively fixed ex ante. As a result, it is at least possible to know what a fully rational person, with access to easily available information, would perceive to be his ex ante situation.

Once we leave the artifice of the gambling casino, both of these matters—foreseeing the existence of a particular risk and foreseeing its probability of occurrence—seem much more problematic.[34] Stated at a high, enough level of generality, every eventuality in life, however remote or unprecedented, is foreseeable, and hence—if it could have been avoided but isn't—is chosen. (Again, for the moment I set to the side the problem of unwanted but uninsurable risk.) So, one can argue the person who bought marshland in California in 1875 should have anticipated that 125 years later the government might preclude all development on the land under a wetlands protection act. He should have anticipated it, not because any of the particular social and political facts that were preconditions to that regulation were themselves foreseeable, but because it was foreseeable that circumstances might change over time in a way that would lead the government to regulate the use of land in various fashions that might lower its value to the owner substantially. That defense of ex anteism, while logically unfalsifiable, is likely to

34. For thoughtful discussions of this problem, *see* Feldstein, *supra* note 3, at 92–94; Kaplow, *supra* note 4, at 525.

strike most people as without any traction, on moral or welfarist grounds. If people in fact don't foresee a whole host of potential risks at a level of specificity that would make the decision to face them in any sense deliberate and rational, then an even moderately strong version of rational expectations is unwarranted. To operationalize a coherent version of ex anteism, we need some theory about which risks are psychologically salient, such that they actually affect decision-making, and which are not. It is no accident, I think, that the luck egalitarian literature, when it leaves behind the artifice of Monte Carlo in favor of real-world risk-taking, tends to gravitate to examples of ultrahazardous activity to defend its moralism about choice. The literature is peppered with morality tales like that of poor Bert, or the party of climbers who take a calculated gamble to go up a difficult route under hazardous conditions, or (most morally wretched of all) the party of tourists who ignore signs and verbal warnings to venture on a foolhardy hike across a treacherous steep slope "rendered more treacherous by their mid-hike alcohol consumption."[35] These examples all pose risks that are about as close as you can come, in psychological prominence, to the gambling casino. Once we move away from such stark cases to the sorts of risks embodied in everyday choices, the psychological salience of particular risks, and with it the moralistic case for ex ante justice, weakens considerably.

---

35. The latter two examples are from Arneson, *Luck Egalitarianism, supra* note 15, at 348. *See also* RAKOWSKI, *supra* note 15, at 79 (for similar "exemplary instances of option luck"). There are other features of ultrahazardous activity, beyond its psychological prominence, that may make it a particularly attractive example to make the case for ex anteism. Two factors are worth noting here, both arising from the fact that ultrahazardous activities are (eponymously) assumed to pose higher-than-customary levels of risk of serious injury. First, that higher level of risk suggests a higher chance that the activity is imprudent, in the sense of posing risks disproportionate to any social value to the activity, with the consequence that there is no social gain to be gotten from encouraging the activity by subsidizing the costs associated with it. Second, a higher than usual level of risk may make cause people to regard others' choice to assume it as an act of commission rather than omission, and thereby assign concomitantly greater moral responsibility for the bad consequences that flow from it. That is, if we believe that people have voluntarily assumed greater risk than the norm, as opposed to merely failing to reduce or eliminate existing risk, we are more likely to view them as morally responsible for the bad consequences of their choice. *See* Daniel Kahneman, et al., *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias, reprinted in* CHOICES, VALUES AND FRAMES 159, 167 (Daniel Kahneman & Amos Tversky eds., 2000); Ilana Ritov & Jonathan Baron, *Status Quo and Omission Biases*, 5 J. RISK & UNCERTAINTY 49 (1992).

Similar problems arise, in an even more exaggerated form, with respect to assessing the ex ante odds of any known risk. If people cannot accurately assess the probabilities of various bad or good outcomes, they cannot meaningfully be said to have chosen deliberately to bear those risks rather than insure against them. Again, this poses no problem in the casino, where the distribution of outcomes is mathematically determined and exogenously fixed. It poses a much bigger problem once we leave behind the artifice of the casino for the real world, where the probabilities associated with various possible outcomes generally cannot be fixed objectively—where (in Frank Knight's famous distinction) we are faced with problems of uncertainty rather than risk.[36] Maybe, just maybe, it is meaningful to say that the risk of another major earthquake in California over the next 10 years is 5 percent. But what could it possibly mean to say that the odds of fundamental tax reform over the next 10 years are 5 percent? In the realm of legal change, we are dealing with historical phenomena that are the product of deliberate, human agency, with many causal factors that will never be reproduced. That reality makes it almost meaningless to try to extrapolate the odds of future tax reform based on past experience, or even—except in extreme cases—based on current, known social facts. And how could we ever prove any ex ante estimate false? Ex post results are, of course, no help whatsoever, since any outcome is consistent with any ex ante probability, except of course for the extreme prediction that x, which subsequently comes to pass, had zero probability of occurring.

The same difficulties in isolating causal factors for social events that make it impossible to fix the probabilities of a particular legal change going forward, also cast doubt on the strong incentive-based argument against retroactive compensation in the event of that change. As noted at the outset, the efficiency costs of retroactive compensation come not from any supposed effects on the investments directly targeted. As those investment decisions are by definition sunk, they cannot be altered by any retroactive decision on compensation. The costs come rather from the effect that any bailout will have on investors' rational expectations going forward. The assumption here is that if Congress repeals the exemption on tax-exempt bonds, it changes the assessed probabilities of "like" government action in the future. But what exactly counts as "like" here? Does such a repeal tell people that cognate tax preferences

36. FRANK H. KNIGHT, RISK, UNCERTAINTY, AND PROFIT 19–21 (University of Chicago 1971) (1921). Knight used "risk" to describe situations in which the probabilities associated with various outcomes are objectively knowable, and used "uncertainty" to describe situations in which they are not. That distinction tracks the standard distinction in contemporary statistics between frequentist and Bayesian probabilities.

are likely to be repealed? Or does it imply just the opposite: that the fact that one provision was changed while another "cognate" one was not reflects an implicit policy decision to leave the second unchanged? Does it imply that other changes outside the tax field are now more (or less) likely, and if so, what other changes? Or might it even imply that this very preference is likely to be reinstated in some other form by some subsequent Congress?[37] The problem, obviously, is that in order to answer these questions, we have to have a theory of what caused this particular piece of reform, from which we can try to extrapolate Congressional treatment of " cognate" issues in the future. However difficult it may be to come up with such a theory of causation in the case of earthquakes, so as to be able to predict the future from the past, it is surely far more difficult in the context of most political action. Moreover, whatever category investors place past acts in for purposes of making future predictions about government behavior, in order to assess the incentive costs of the past we also need a theory of how long history colors future perceptions. Will an act of grandfathering in 1980 color investor expectations for the next 2 years? next 5? next 20? If (as one assumes) the force of history tails off over time, at what rate does it tail off? Without answers to these questions, it is difficult to know how, if at all, past acts of the government will be impounded in investors' ex ante expectations going forward.

None of this is meant to suggest a radical skepticism about our ability to predict anything about future political action, or any other social change, from the past or present. Obviously, more knowledge is generally better than less, and it is often possible to make better than random guesses about the future course of social events. At the extreme, when predictions cover a short time horizon and the most important causal factors all point in the same direction—say, predicting on December 31, 2000, after the Republicans took control of the Presidency and Congress, that the estate tax would be radically scaled back within a year—one can make predictions with a fair degree of certainty. In such cases, it is reasonable to assume (from a welfarist perspective) that rational actors will alter their behavior to reflect the high probability of legal change, and (from a luck egalitarian perspective) that if they don't alter their behavior when alteration is possible, that they are in some morally interesting sense responsible for the ex post consequences of their

37. For thoughtful discussions of these problems in the context of transition relief, see Feldstein, *supra* note 3, at 93; SHAVIRO, *supra* note 2, at 93, 143.

choice. The point, rather, is to suggest that such clear cut cases might account for a very small percentage of the decisions people make, and that most people—even fairly sophisticated investors—most of the time never even consider the possibility that government policies on which the expected outcome of an investment depends might change. If they do consider it at all, they have so little confidence (with good reason) in their ability to predict the likelihood of change that they simply disregard it in their calculations.[38] If that surmise is right, then surely both the moralistic and welfarist arguments for blanket ex anteism in this context are considerably weakened.

2. *The Avoidability [Permissibility?] of Risk*

Both the fairness and welfarist cases for sticking people with the consequences of their choices depend on the risk in question being avoidable—meaning, that it could have been avoided by choosing a reasonably attractive alternative that did not pose such a risk. Again, this condition poses no difficulties in evaluating the claim of our gambler in Monte Carlo for compensation. There is not the slightest doubt that the risk in question is avoidable, and hence, when not avoided, voluntarily (if foolishly) chosen. The sole purpose of gambling (setting aside the consumption value of the activity itself) is to convert a sure thing (the money wagered) into a risky bet. In that context, it is nonsensical to suggest that the government ought to step in as a de facto insurer, to undo the effects of that gamble ex post and return each gambler to his ex ante position. More precisely, such a policy just amounts to a prohibition on gambling. Thus, we can simply assume, a priori, that whatever degree of risk a gambler exposed himself to was deliberately chosen. (I set aside for the moment various sorts of irrationality that might call that characterization into question for other reasons.)

In the case of legal change, and indeed, most other real-world problems of decision-making under uncertainty, assessing whether a given risk is avoidable, and hence meaningfully chosen, is a much more complicated issue.

First, investors rarely choose to expose themselves to transition risk as an end in itself. Like the risk facing Bert, it is bundled into other choices (to invest in land, securities, drive a motorcycle, etc.) that are desirable in themselves, apart from the risk. Individuals may want to bear that

38. For reasons discussed elsewhere in the paper, the possibility that an omniscient market has already done that work for them and impounded the risk into the market price of investments is at best only a partial answer.

collateral risk as well as a voluntary side bet, but they may not.[39] The possibility that any collateral risk may be unwanted is anticipated and subsumed in the (welfarist or fairness) case for the government to act as an insurer where the private market has failed to provide that option. For ex ante types who insist on an "adequate insurance" option in order to stick with a strong ex ante perspective, the fact that transition risks are usually bundled in with other choices presents no conceptual problem: Any collateral risks that cannot be fully insured against are not meaningfully chosen, and hence there may be a case for ex post intervention on fairness or welfarist grounds. But it imposes a huge empirical problem, and one that is by definition absent in the casino example, since it requires us to assess in every case whether the market provided an adequate opportunity to lay off that risk, through third-party insurance or self-insurance through diversification. At least in the case of legal change like fundamental tax reform, the answer will very often be no, and the reach of ex anteism concomitantly limited.

But other ex ante types who are not prepared to go that far—who are willing to stick people with the foreseeable consequences of risky behavior they could have avoided *by some means*, even when insurance against that isolated risk is not realistically available—face a serious problem in figuring out what level of risk avoidance we can fairly require of people. Life is full of dangers. Every time we cross a busy street, whatever our level of precaution, we increase the odds of being hit by a car. Does that make any resulting accident a product of a deliberate, knowing choice to expose ourselves to risk, and hence noncompensable? If so, then virtually all bad things that happen to people, at least once they reach the age of maturity, are converted into option luck, as most could have been avoided by some precautionary measure. (Worried about another terrorist attack on New York? Move to the wilds of Montana, which no terrorist is likely to attack. Worried about crazy co-workers on a shooting spree? Stay home and telecommute. Worried that friends or loved ones may steal your heart? Keep your own company.) For welfarists, the concerns raised here are, at least in theory, easily incorporated into a welfarist calculus, by noting that some levels of private precaution may be socially inefficient, because they fail to account for the external benefits of pursuing certain activities. In such cases, there may be a strong

39. For recognition of this general problem, see Anderson, *supra* note 24, at 322–26; Lippert-Rasmussen, *supra* note 20, at 555 (labeling the pure bet as a "gamble proper" and the bundled risk as a "quasi-gamble").

case for ex post compensation as a form of subsidy to a socially beneficial activity.[40] For luck egalitarian types, the response is less clear. If—as some have suggested—the appropriate response is to stick people with the ex post consequences only of those risks that were not "prudent" or "reasonable" to undertake, by what criteria do we judge prudence here?[41]

3. Empirical Evidence Concerning Decision-making Under Uncertainty

The discussion in subsection A 1 above goes to the question whether the odds of future legal change are generally "knowable" by a fully informed, rational investor, such that the possibility of legal change would be "correctly" factored in to the ex ante decision to invest. There is a second problem as well in defending strong ex anteism in this context: whether the typical investor acts as a rational investor would act with respect to whatever information is knowable. A very substantial empirical literature has emerged in psychology and behavioral economics over the past twenty years, detailing the ways in which people actually make decisions in the face of risk or uncertainty. The basic, persistent, findings are that people systematically violate the two core assumptions of classical economic theory about decision-making under uncertainty: that the utility of each outcome will be weighted by the probability of its occurrence (expected utility theory); and that decision-makers will exhibit risk aversion across the range of possible outcomes.

Among the key findings relevant for present purposes are the following. First, contrary to the fundamental assumption of expected utility analysis,

40. In the law and economics literature, this problem has been raised in the context of torts in the (admittedly analytically non-rigorous) distinction drawn between "activity level" and "care level." *See* Steven Shavell, *Strict Liability Versus Negligence*, 9 J. LEG. STUD. 1 (1980). The general view is that, with respect to the private costs and benefits of a given risky activity, a strict liability rule (analogous to a no-compensation result in the transitions context) is efficient, for the conventional reason that it automatically forces the internalization of (private) costs and benefits. *Id.* at 2–4. But this, of course, does not take account of costs and benefits externalized onto others, which—if accounted for—might well produce a different "optimal" activity level.

41. Vallentyne, *supra* note 15, at 533–36; Dworkin, *supra* note 13, at 293–96. RAKOWSKI, *supra* note 15, at 79–80, suggests that we make an exception from the hardline ex ante position only for losses that result from "whatever risk was a necessary concomitant to the ownership of property essential to live a moderately satisfying life in a given society." That rather minimal concession leaves virtually all the risks that people routinely face each day in the category of option luck. For critical discussions of the problems that "reasonable avoidability" poses for luck egalitarianism, see Anderson, *supra* note 24, at 295–302; Otsuka, *supra* note 15, at 46, 53–54; Lippert-Rasmussen, *supra* note 20, at 552–57.

people evaluate outcomes not in terms of the final states of wealth or welfare, but in terms of gains and losses relative to some neutral reference point, generally the status quo ante (the so-called "endowment effect").[42] Second, people overweight certainty on both the gain and loss side, relative to other changes of probabilities moving towards certainty (the "certainty" effect). Thus, people place much greater (negative) weight on moving from a (say) .95 likelihood of loss to a 1.0 certainty of it than moving from a .90 probability of loss to a .95 probability; the same effect is present, in reverse, on the gain side.[43] Third, people tend to underweight high probability events. Fourth, in dealing with very low probability events, people exhibit two contrary impulses: to ignore such events entirely (edit them out); but, if the events survive editing, to overweight them.[44] The consequence of the last phenomenon, as Kahneman and Tversky note, is that the function describing the weights people attach to possible outcomes "is not well-behaved near the endpoints," since "very small probabilities can be either greatly overweighted or neglected altogether."[45] Fifth, to the extent the tendency to overweight low probability events dominates people's assessment, that tendency, when combined with the tendency to underweight high probability events, makes people "relatively insensitive to probability differences in the middle of the range."[46] Sixth, people's intuitive probability judgments are often inconsistent with (known) objective probabilities, and systematically vary with the descriptions given a particular event. Thus, for example, when a described risk is unpacked into its component parts (e.g., homicide into homicide by acquaintance and homicide by stranger), the disjunction increases its assessed probability.[47]

---

42. Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, *in* CHOICES, VALUES AND FRAMES, supra note 35, at 17 [hereinafter *Prospect Theory*].

43. *See* Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, *in* CHOICES, VALUES, AND FRAMES, *supra* note 35, at 7–8 [hereinafter *Choices, Values and Frames*]; Amos Tversky & Daniel Kahneman, *Advances in Prospect Theory: Cumulative Representations of Uncertainty*, *in* CHOICES, VALUES, AND FRAMES, supra note 35, at 44, 60, 64 [hereinafter *Advances in Prospect Theory*]. This underweighting of moderate and high probabilities relative to sure things contributes to risk aversion in gains by reducing the attractiveness of positive gambles, and to risk-seeking in losses by attenuating the aversiveness of negative gambles. *Id.*

44. Kahneman & Tversky, *Prospect Theory*, *supra* note 42, at 37; Tversky & Kahneman, *Advances in Prospect Theory*, *supra* note 43, at 60.

45. Tversky & Kahneman, *Advances in Prospect Theory*, *supra* note 43, at 50.

46. *Id.* at 60.

47. Craig R. Fox & Amos Tversky, *A Belief-Based Account of Decision under*

Many of the foregoing findings were first developed in assessing people's decision-making in the context of risk (that is, facing known probabilities). But more recent work suggests that these violations of expected utility theory carry over to decision-making under uncertainty, or (at the extreme) in complete ignorance of probabilities, and indeed may be more pronounced in the latter cases than the former.[48]

Many of these findings have obvious relevance to the sorts of risks at issue in the transition context, as many of those risks are—at least at the time of initial financial commitment—low probability events, susceptible to contrary tendencies (to ignore entirely or to overweight). Many are susceptible to unpacking in a variety of ways that would give rise to very different aggregate estimates of probabilities.

What, if anything, do all of these findings imply for the strong version of ex anteism? Again, it seems clear that they undercut the straightforward case for an ex ante perspective considerably, at least for the welfarist. All but the first two of these findings suggest not only a violation of expected utility theory, but a violation of any other measure of ex ante rationality as well. I.e., people persistently misassess the objective, ex ante state of the world in a fashion that causes them to choose badly, whatever they are trying to maximize ex ante. The implications for compensation policy, however, are less clear. That there is a lot of "noise" in the way that people calculate the probabilities of uncertain outcomes, relative to the objective state of the world, does not rule out the possibility of systematic error that can be a useful basis for policy prescription. Just to note one possibility: If it turned out that individuals systematically under- (over-) predicted the likelihood of future government bailouts based on past government bailouts, it would lower (raise) the incentive costs of any compensation plan concomitantly.

Other findings are more complicated to interpret. I have in mind here the first finding (endowment effect) and second finding (overweighting the movement to certainty over other numerically equal changes in probability). It seems possible to construct a coherent, "rational" view of ex ante preferences that would explain each of these effects in psychological terms. Thus, in the case of the endowment effect, it may be that the prospect of keeping what we already have just ***does*** give us more pleasure than obtaining what we don't. In the case of the certainty effect, it may be that contemplating the mere possibility, however small, of losing a benefit we hoped to get (or escaping a loss we hope to avoid)

Uncertainty, *in* CHOICES, VALUES, AND FRAMES, *supra* note 35, at 118, 122.

48. Amos Tversky & Craig R. Fox, *Weighing Risk and Uncertainty*, *in* CHOICES, VALUES, AND FRAMES, *supra* note 35, at 93, 116; Amos Tversky & Peter Wakker, *Risk Attitudes and Decision Weights*, 63 ECONOMETRICA 1255, 1269–74 (1995).

itself gives rise to disutility (utility) independent of the expected values of the outcomes. The problem comes in both cases in moving from ex ante to ex post. In the case of the certainty effect, whatever utility we gained (lost) from ex ante certainty about the outcome by definition must disappear ex post, since whatever the outcome, it is now certain, and its value relative to other outcomes must therefore reside in something other than its relative probability of occurring.[49] In the case of the endowment effect, the implications are less clear. One could imagine that the preference for the status quo built into the endowment effect persists ex post— that people continue to value holding on to what they once had, just because they once had it, more than they value getting what they never before had. But it is equally possible that the endowment effect created by *past* wealth tails off over time, as people adjust their baseline to whatever is their (new) status quo. There is at least some empirical evidence to support the latter view.[50] Of course, it is always possible that the perfectly rational actor takes all of this into account ex ante, aggregating the very different values her ex ante and ex post selves attach to the same outcomes, with each set of preferences weighted appropriately to account for their duration, etc., and then reaching a decision that (ex ante) maximizes her aggregate utility over time. But it seems more likely that the typical ex ante chooser is systematically misconstruing and/or underweighting the preferences of her ex post self.

4. *The Problem of Past Selves Binding Future Selves*

The foregoing poses one example of a larger problem with ex anteism: the extent to which ex ante choosers can be trusted to look out for the welfare of their future selves that will be bound by their choices. The discussion above suggests reasons for particular distrust in cases of decision-making under uncertainty. Many of those reasons apply whatever the time horizon between ex ante choice and ex post outcome. (They

---

49. To put the point another way, many people's risk aversion probably reflects (at least) two things: the declining marginal utility of income, which leads them to derive less utility ex post from a given increase in wealth than they lose from an equal-dollar decline in wealth; and their psychological distaste for uncertainty. Standard expected utility theory attends only to the former. To the (possibly) considerable extent that the latter is operating as well, its hedonic consequences—unlike the utility consequences of the declining marginal utility of wealth—disappear ex post.

50. For a review of the relevant literature, see Shane Frederick & George Loewenstein, *Hedonic Adaptation*, *in* WELL-BEING: THE FOUNDATIONS OF HEDONIC PSYCHOLOGY, 302–29 (Daniel Kahneman, Ed Diener & Norbert Schwarz eds., 1999).

might well apply, for example, to gambles with instantaneous payoffs). Where there is a significant time lag between ex ante choice and ex post consequences, ex anteism poses other problems as well, arising from the fact that the person who must bear the consequences of a long ago choice may well have chosen differently—not just ex post, but ex ante as well—because he or she is a very different person from that long ago chooser. Again, this may not be a serious problem for our gambler in the casino—whatever irrationalities may be entailed in the ex ante choice to gamble, the almost instantaneous nature of the payoff means that the consequences will be borne by essentially the same person who makes the choice.[51] In many other cases of risky choices, that will not be true. Bert II, many years post accident, might make that helmet decision very differently—not merely because it came out badly, but because, being older and wiser, he understands better what risks he was courting ex ante, and being the one who is actually bearing the bad outcome, would weight its disutility quite differently.

Faced with that possibility, luck egalitarians have taken a very harsh, unforgiving, position.[52] As Marc Fleurbaey puts it, "the decisions you make now may condemn you for the rest of your life."[53] From the moralistic perspective of luck egalitarian, this harshness seems somewhat problematic. Regret is ubiquitous, and not merely because it is cheap. It is ubiquitous, because experience—the ex post—often teaches people something they didn't know, ex ante, about themselves, about how they would experience the bad consequences of a risky choice, even maybe about the ex ante probabilities of that bad outcome. One need not take an extreme view of the temporally divided self to be troubled by a failure to show any mercy to our future selves that must bear the consequences of past foolishness. Luck egalitarian types recognize the

51. Then again, maybe not. Even the person who lost the final, huge, double-or-nothing bet in Monte Carlo may be wiser (if not appreciably older) than the person who made the bet one minute before—wiser, not simply because he knows now that he lost, but also because he knows now something he didn't know ex ante about how he would actually experience the severity of a total loss, and about the irrationality of his ex ante belief that luck would shield him from the 50 percent chance of losing.

52. *See, e.g.*, Dworkin, *supra* note 13, at 306; *see generally* RAKOWSKI, *supra* note 15. Dworkin relents a bit at the end, suggesting that there may be room to accommodate "radical changes in people's minds about how they want to spend their lives," including the profligate "who has wasted his initial endowment and now finds himself with less than he needs to provide even for the basic needs in later life." Dworkin, *supra* note 13, at 334. If that exception extends only to some minimal safety net for the destitute who have becomes so by their own poor choices, it is possible that the exception won't swallow the rule of ex ante (equal opportunity) egalitarianism. If it extends much further, I don't think the rule survives in any meaningful fashion.

53. Fleurbaey, *Equal Opportunity*, *supra* note 16, at 41.

need to exempt adults from the consequences of their juvenile actions on these grounds.[54] But, unless one believes there is (as Fleurbaey skeptically puts it) a "mysterious 'canonical' moment which separates childhood (nonresponsibility) from adulthood (age of responsibility),"[55] the problem has more sweeping implications for luck egalitarianism than can be accommodated simply by delaying the onset of ex ante justice until the age of majority. It suggests, at a minimum, that moral responsibility for past actions must be systematically diluted over time in some fashion.[56]

In welfarist terms, the split between the interests and preferences of past and future selves reduces to the problems of myopia and changing preferences. In theory, again, both concerns can be accommodated in a welfarist framework, which would count the welfare of future selves equally with the welfare of current and past selves. But the manner in which those problems would be accommodated—by acknowledging that most preferences change over time, and that past selves systematically mispredict and underweight the preferences of future selves—significantly undercuts the faith one would have in ex ante choice as the means to optimize (ex post) welfare over time.

54. Arneson, *Liberalism*, *supra* note 15, at 179.

55. Fleurbaey, *Equal Opportunity*, *supra* note 16, at 42 (commenting on Arneson).

56. As Fleurbaey notes, some general principles of mercy along these lines are reflected in various legal doctrines like statutes of limitations, laches, and the law's willingness to reduce criminal penalties in light of "sincere conversions" or contrition after the fact. *Id.* at 42 n.16. Fleurbaey's own (admittedly nonoperationalizable) proposed solution is to say that people are stuck with the consequences of their past choices only if they would make them again were they to go back in time, knowing what they now know (presumably not including the mere fact that they lost the bet). *Id.* at 42.

I am focusing on the limitations of a strict ex ante perspective here, but it is worth noting the mirror image problems posed by a strict ex post perspective. In answering Fleurbaey's hypothetical question—what would I have chosen in the past, knowing what I know now (not including the mere fact that the bet was a losing one)?—our future selves are liable to discount the benefits (probabilistic and actual) to our past selves from the decision actually made. How many smokers, dying of lung cancer, say, "A lifetime of smoking pleasure was worth this early death?" If, as seems likely, the answer is almost none, are we confident that, in reaching that assessment, the dying selves have counted the pleasures of their past smoking selves as 1 with their current selves? The problem of faulty memory here (mirroring the problem of myopia in the ex ante context) is greatly exacerbated by a huge problem that doesn't exist in the ex ante context: given the unidirectionality of time, regret for past decisions (unlike myopia) is free. That fact, I imagine, quite appropriately colors welfarists' skepticism of all ex post justice.

B. Is Choosing to Run the Risk of a Bad Outcome the Same as Choosing the Outcome?

Most of the concerns about ex anteism raised up until this point do not go to the basic analytic arguments in its favor from a welfarist or luck egalitarian perspective. They are as-applied objections, as it were, going to the empirical reality of how decisions in the face of uncertainty are actually made, and how well the case for ex anteism can survive that descent into reality. I want to raise a separate doubt about the adequacy of the ex ante perspective in the case of decision-making under uncertainty that is a more foundational challenge, at least to a luck egalitarian defense of ex anteism, and that applies equally to the artificial world of Monte Carlo and the more messy real world of risk-taking. The doubt is this: whether choosing to run the risk of a bad outcome is really the same as choosing that outcome. The ex ante view assumes, at first cut, that the answer to this question is yes. (Again, the unavailability of insurance may change that answer for some.) I want to suggest there is a fundamental difference between the two, and that such difference may have some troubling implications, at least for the moralistic treatment of option luck under luck egalitarianism.

In choice under uncertainty, people choose to expose themselves to a risk of a bad outcome with a probability less than 1.0 (if it were 1.0, it would be choice under certainty). When that probability turns into a certain outcome ex post, therefore, something important has changed between the time of ex ante choice and the time of ex post payoff. What has changed is not the possibility of a particular outcome, but its probability. As to the individual in question, that change in probabilities is, I think, best understood as a species of brute luck: the product of events (changes in the external world, in available information about the external world, etc.) for which the individual in question cannot be held responsible.

An example may help to make the point. Let us assume that Smith buys a piece of land for $100,000 with the intent of holding it for 10 years and then selling it. Assume that at the time of purchase, Smith correctly (whatever that could mean in this context) calculates there is a 1 in 1000 chance that environmental regulation X will be adopted sometime over the next 10 years, and that if it is adopted it will reduce the value of his land to zero. Assume that the market agrees with his estimation here, and the cost of that risk is therefore impounded in the purchase price of the land. Assume finally that insurance against such regulations is not available, either on the market or through self-insurance through diversification. One year after purchase of the property, there is a serious, unprecedented environmental disaster that creates a groundswell of public support for

tougher environmental regulations, including regulations of type X. At that point, the smart money would put the odds of regulation X's being adopted at 1 in 10. Three years after purchase, the Democrats unexpectedly regain control of Congress, raising the odds of regulation X to 1 in 5. Six years after purchase, the Democrats unexpectedly win the Presidency, raising the odds of regulation X to 1 in 2. At each of these junctures, the market price of the land drops to reflect the increased odds of regulation X's being adopted. Finally, seven years after purchase, Regulation X is adopted, reducing the value of the property to zero.

The ex ante view says, Smith got what he bargained for here—the possibility that this land would be worth nothing due to Regulation X—and he was compensated for that possibility up front by a lower market price. The problem with that view is that Smith self-evidently did not get what he bargained for. What he bargained for was a piece of land with an expected value of $100,000, and a .001 probability of Regulation X being adopted and thereby reducing its value to zero. What he got was an investment worth nothing, and Regulation X with a probability of 1.0. The fact that the market price was discounted slightly up front to reflect the risk helps Smith, but only slightly—it represents, in effect, a very partial shifting of the loss from buyer to seller.

The obvious rejoinder from ex ante types is: Smith did get what he bargained for, a fact that is evident once we recognize that he bargained not just for the expected value of the outcome, but for the expected variance as well. It is merely the fallacy of ex post sentimentalism that leads us to ignore the ex ante choice and focus only on the outcome. But I am not sure this is an adequate response, for the following reason. Smith did not just bargain for the possibility of zero value; he bargained for zero value with a probability of .001. Those odds turned out to be wrong—and by definition will always turn out to be wrong when a gamble loses. And they turned out to be wrong for reasons that Smith could not have reasonably anticipated (that is definitionally included in the statement that he correctly calculated the odds on day 1). Those reasons might have been subsequent exogenous events, which were themselves unanticipatable (or anticipated at a lower probability of occurring than 1.0). They might have been newly discovered information about a state of affairs in existence at the time Smith bought the land, but not reasonably knowable at that time. In either case, from Smith's point of view, each change in the state of affairs that increased the perceived odds of Regulation X being adopted from the time of purchase until the time of passage was a stroke of bad luck. Final passage (raising the probability to 1.0) was the ultimate piece of bad luck.

This analysis generalizes to all risky decisions. In some (e.g., Monte Carlo), the updating of known probabilities is instantaneous, with a flip of the coin or deal of the card. In others, it may occur gradually, over a long period of time, as new information comes to light or new events occur, with the payoff being merely the last in a series of corrections of predictions based on better information.[57] (Indeed, as Dan Shaviro has noted, the process of updating doesn't end with the adoption of Regulation X, since, having been enacted, Regulation X could be repealed. Thus, its adoption is just one more data point bearing on the likely value of Smith's land at the end of ten years, when he plans to dispose of it.) In all cases, the suggestion here is, from the perspective of the gambler, the change in perceived odds from the time of a fully rational gamble to the time of payoff is just plain brute luck, akin to a random thunderbolt from the sky.[58] That conclusion is not refuted by the strongest version of the rational expectations story, in which the probabilities of every bad thing

---

57. The distinction between acquiring better information about facts already in existence and acquiring information about newly arising facts may not always be clear. The choice between the two characterizations of statistical updating depends in large part on the extent to which one believes in a physically deterministic universe. Take a coin flip: if the universe is undetermined, then how the flipper will flip, and what side of the coin lands up as a result, both constitute events arising subsequent to the bet, about which it is impossible to know anything at the time of the bet beyond the background 50/50 odds that obtain for all flips in the aggregate. If, at the other extreme, one thought that the universe were absolutely determined, so that the way the coin would be flipped and the way it would land was predetermined from the start, then in theory one could know at the moment of the bet, with a probability of 1.0, whether it would lose or not. But the latter information is, as a practical matter, unknowable by anyone, including the coin flipper. For our purposes, then, the distinction is immaterial, since (or so I am arguing) in either case the bettor is not responsible for the inaccuracy in his prediction, since he did not have the capacity to make a better prediction than the one he made.

58. RAKOWSKI, *supra* note 15, at 76–77, anticipates a version of this argument and counters it, but I think not adequately. Rakowski suggests that option luck might be described (in his view wrongly) as a species of brute luck, on the ground that "[option] luck is an epistemic concept, a word we attach to events we are as yet unable to predict but that, in our fully determined universe, we might have anticipated had we had greater knowledge. It [thus] signifies nothing more than our ignorance." *Id.* at 76. So far so good—as long as determinism here is understood to mean not that the future course of events can't be altered by human will, but simply that they cannot be altered by the will of the gambler. But Rakowski's response, I think, misses the essential problem. He argues that that fatalistic view is at odds with the fundamental fact that a gambler (by hypothesis) could have avoided the gamble, and thus had it in his power with respect to option luck, but not brute luck, to avoid the risk of a bad outcome. *Id.* at 77. True enough. The problem, however, is not whether the risk was avoidable, but whether it would have been prudent to choose to avoid it. The answer is yes, if the gambler had known then (ex ante) what he knows now (ex post). That he didn't is no fault of his; it is (or so I am suggesting) the product of ignorance that he could not avoid.

coming to pass are impounded in the price on day 1, and updated regularly as new information comes to light. All that the strongest version does is to shift earlier in time the moment(s) at which new information is impounded in the price of assets, thereby recentering rational expectations on a new mean expected value. As Dan Shaviro's analysis drives home, that such information may be impounded in the price at an earlier time than we customarily think may have important implications for transitions policy. It implies that it is often not the nominal owner at the time of legal change, but rather prior owners, who bear much of the windfall gains and losses from legal change. But that observation goes only to the timing for brute luck to do its work. It does not change the very different fact that the total change in probabilities of a bad event from .001 to 1.0 will be absorbed by some group of holders, as a form of windfall loss.

Of course, the problem posed by the foregoing discussion disappears if, for any individual investor, ex post outcomes equal ex ante expectations. That is unlikely to be so for any individual risky investment. It may, however, be approximately true for an individual investor if we aggregate the outcomes of all of their "like bets" over a representative period of time. (What ought to count as "like" or "representative" for these purposes, however, is not an obvious issue.) Indeed, some proponents of a strong ex anteism have offered this possibility as an additional justification for sticking people with the ex post consequences of their ex ante bets.[59] This is a very important point, and may obviate most fairness concerns across a wide range of choices. It cannot, however, obviate them all. For any risky bet, however frequently repeated, there will be big net losers and winners at the tail ends of the distribution.

Describing the split between ex ante and ex post in risky bets as involving an unanticipated change in probabilities anticipates the difficulty posed for luck egalitarianism. We cannot say that the gambler is "responsible" for his option luck, in the same way that we can say that someone who chooses a certain outcome (e.g., steak for dinner) is responsible for the choice he has made. In the latter case, the chooser got what he asked for. In the former, he did not—he got something better or worse than he had reason to expect

59. SHAVIRO, *supra* note 2, at 27–32; *cf.* Louis Kaplow & Steven Shavell, *Fairness Versus Welfare*, 114 HARV. L. REV. 961 (2001). The argument does seem to suggest some self-doubt among strong ex ante types about the basic fairness argument for ex anteism in risky choices in the first place. If the moralistic reason to stick people with the ex post outcomes of risky choices is, "You made your bed, now lie in it," it wouldn't seem necessary to the argument to show that the many beds each is now lying in are likely, on average, to be no better and no worse than their mean expected values ex ante.

he would get, and he was not, in any meaningful sense, responsible for the change in those odds that produced a better or worse outcome with absolute certainty, any more than someone who ordered steak and got lamb delivered instead is responsible for that outcome. In other words, option luck—at least when outcomes deviate from the expected value of the bet—is a form of brute luck.

Having said that, I am certain that most people (strong ex ante types and not) will stick to their guns that the run-of-the-mill gambler in Monte Carlo deserves no sympathy, on the grounds that the possibility of such brute luck changes in probabilities was part of the ex ante bargain—that he chose not merely to run a risk of (let us say) a 1 out of 1000 chance that he would lose all his money, but also to run the risk that he would get unlucky on those odds, and the .001 probability would be converted ex post to a 1.0 probability. I do not think the choice between these two characterizations of what is "chosen" can be resolved by appeal to logic; I think it tracks intuitions operating at a different level. My own guess is that, while most people would intuitively regard the run-of-the-mill gambler as having "chosen" the bad ex post consequence he ends up with, they might balk at that characterization of Smith's plight, sandbagged by Regulation X. In the latter case, at least, I suspect that the description of the change in probabilities from ex ante to ex post as a form of brute luck will resonate for many, and the reason for this is that it captures their sense that Smith, in some morally relevant respect, got colossally unlucky here. If I am right about this, the question is why—what is different about the unlucky Monte Carlo gambler and unlucky folks like Smith. Perhaps the answer merely comes back to all of the differences discussed above that make the choice to run the risk of getting really unlucky less of a "real choice": the fact that the risk was bundled in other choices, the probabilities were not knowable with the same certainty, the long time lag between choice and outcome, etc.

For welfarists, again, all of the foregoing is irrelevant, although the example does highlight certain aspects of the welfarist calculation that might change in the case of very low probability events—to wit, that the incentive costs of ex post compensation will be relatively low (since it will be discounted by the low probability of occurrence),[60] and in some cases we might not want to create an incentive to weigh longshot risks at all. We simply don't think it will increase social welfare to have a group of investors in 2003 spend a lot of time worrying about the shape of possible tax reform 20 years from now, or the risks of a meteor hitting the United States in the next 20 years, when they are (say) deciding how much to spend or invest currently, and in what forms to invest.

---

60. *See* Kaplow, *supra* note 4, at 593.

C. Are we Responsible for our (Ir)rationality?

The fictive hero of the ex ante perspective is a self-confident, omniscient guy who can instantaneously process infinite branches of a decision tree, extending infinitely in time, each properly weighted with its objective odds of occurring, and, with lightening-quick, coolheaded intelligence, come up with the optimal (that is to say rational) choice, given his own preferences over outcomes, degree of risk aversion, etc. The comments in Section A suggest reasons to doubt how accurate a picture this is of most people's decision-making under uncertainty. For equal opportunity egalitarians, however, there is a further problem to face: whether (and how far) any differences in our capacities to be rational decision-makers are our moral responsibility. As Richard Arneson acknowledges, the capacities needed for responsible choice—foresight, perseverance, calculative ability, strength of will, self-confidence—are themselves partly a product of factors over which we have no control: genetic endowments, the good fortune of having decent parents, etc.[61]

For welfarists, this observation is again of no particular moment. It is of course relevant to the welfarist analysis that some number of people appear incapable of rational foresight, since the larger the numbers, the lower the welfare losses from distorting ex ante incentives. But precisely why people seem hellbent on behaving irrationally is irrelevant (unless of course we are embarked on a separate campaign to ameliorate the underlying causes of irrationality). For luck egalitarians, however, it is highly relevant. If we cannot help making bad choices, then the ex post consequences of those choices are converted from option luck to brute luck.[62] (More precisely, the increased odds of a bad outcome, due to our imprudence, are converted from option luck to brute luck.) Note what might strike some as the ironic result here: If Bert acted prudently in hopping on that motorcycle, we leave him in the ditch. If he can show that he acted imprudently, we will save him, but only if he can show that his imprudence was genetically or socially determined.[63]

---

61. Arneson, *Equality and Equal Opportunity*, *supra* note 15, at 80–82. For other acknowledgments of the problem, see Cohen, *supra* note 15, at 934 ("We may indeed be up to our necks in the free will problem, but that is just tough luck. It is not a reason for not following the argument where it goes.").

62. For thoughtful discussions about whether and how luck egalitarianism ought to accommodate the differential capacity to perceive risks "correctly" (that is, in accordance with objectively determinable odds), see Fleurbaey, *supra* note 24, at 524–26; Lippert-Rasmussen, *supra* note 20.

63. More precisely, I suppose, we would want to compensate him only for the

Salvaging the ex ante justice of luck egalitarianism at all then depends on one's believing that there is a such a thing as "chosen imprudence"; believing that it is a widespread phenomenon; and being able to come up with some mechanism to separate "chosen" from "unchosen" imprudence. Of course, the relevant choice is not between no responsibility and complete responsibility for our imprudence, but instead degrees of responsibility.[64] That fact, however, should be of little comfort to luck egalitarians, as—if anything—it increases the complexity of operationalizing luck egalitarianism enormously.[65] The mechanism that John Roemer has gamely proposed to handle this problem underscores those operational difficulties. In Roemer's proposal, we hold people responsible for their choices only to the extent such choices are more imprudent than the mean choice made by their sociological type. Thus, if two people each smoke the median number of years for their sociological type (determined by sex, race, class, occupation, parents' smoking habits, etc.) then they are each entitled to equal indemnification against the costs of cancer, even if one smoked eight years and the other twenty-five.[66]

III. CONCLUSION

All of the foregoing bears on the general case for sticking with an ex ante perspective in decision-making under uncertainty. How, if at all, do any of these reservations apply to the narrow question on the table here: the appropriate treatment of individual gains and losses from legal transitions?

First, it is quite plausible that the kinds of legal transitions we are concerned with here look much more like Monte Carlo than the sad saga

---

increased ex ante odds of a bad outcome over what they would have been had he acted more prudently. How that could ever be done I leave to others.

64. Cohen, *supra* note 15, at 934.

65. See here Fleurbaey's waggish updating of Cohen's famous fictitious inquiry from the Ministry of Equality, which Fleurbaey offers to underscore the difficulty of implementing luck egalitarianism: "Hi! I'm from the Ministry of Equality. If, by any chance, you are unusually unhappy today, you will receive an allowance of x% of what would compensate you if you can prove that you are less than (100-x)% responsible." Fleurbaey, *supra* note 16, at 43 n.17.

66. Roemer, *supra* note 15, at 150–52. Roemer's proposal was the subject of lengthy discussion in the April/May 1995 Boston Review. For a brief, sensible critique of the proposal, and skepticism about whether it is possible to come up with any other "operational definition of a truly responsible choice," see Fleurbaey, *supra* note 24, at 503–05, 523–24. Roemer's fallback plan for dealing with the problem of responsibility for our choice-making capacities is to leave it to political institutions to resolve what choices people can be held responsible for. As Fleurbaey notes, that solution doesn't solve the problem; it merely pushes it off on another body, presumably one even less well qualified to address it than luck egalitarians themselves. Fleurbaey, *supra* note 16, at 39.

of Bert. To begin with, in the world of financial investments, we may be dealing with a relatively sophisticated group of risk-takers, reasonably well able to assess the risks they face and self-insure through diversified portfolios.[67] The skepticism expressed above about whether information about the past helps actors "rationally" update expectations about the future may also be less warranted in the context of transition relief than other sorts of legal or social change. That is so, because the effect of *transition relief* on ex ante incentives going forward may be clearer than the effects of the underlying legal change itself (tax reform, regulatory reform, etc.) on rational expectations about future legal changes, as people may predictably process each act of transition relief as part of a larger category of "retroactivity protection," and all share a clear understanding of what sorts of legal changes are likely to garner such protection in the future. There is an additional argument against compensation in this context sensibly noted by many commentators: We do not routinely protect investors against market risk, presumably for what we regard as good reasons. If we are going to single out that portion of market risk that is created by change in government policy, we presumably need some good reason to do so—e.g., considerations of political economy—that distinguishes this case from all others.[68]

Finally, there is the factor that is likely to strike most people as the most important: ex post losers in the transition game will not be lying in a ditch somewhere about to bleed to death if we don't bail them out of their imprudence. As Fleurbaey himself notes, his sad tale of Bert would lose much of its emotional punch if Bert were faced merely with the loss of a finger due to his negligence, rather than the loss of his life.[69] To the extent it is this last factor—the direness of the straits the ex post loser finds himself in—that we really care about, it is worth noting that welfarism can accommodate that concern within its internal logic, whereas luck egalitarianism cannot. The reason for this was adumbrated above: that welfarists' attachment to a strong ex ante perspective is not foundational, but instead contingent on certain empirical assumptions. Up until now, we have been focusing on the empirical assumption—that

67. This seems more plausible for some investments (securities) than for others (primary residences).

68. Kaplow, *supra* note 4, at 535; SHAVIRO, *supra* note 2, at 74. For discussion of possible political economy reasons to treat government-imposed risk differently from market-imposed risk, *see* Fischel & Shapiro, *supra* note 4, at 292–93; Ramseyer & Nakazato, *supra* note 1, at 597–99; Farber, *supra* note 12, at 288–94.

69. Fleurbaey, *supra* note 16, at 40.

ex post compensation will distort future decision-making—that drives welfarists to an ex ante perspective. But, as noted at the outset, the incentive effects of a compensation policy are only one part of the welfare calculus. A number of other factors affect welfare that are orthogonal to the choice of an ex ante over ex post perspective, or cut against it. In the latter group are the potential gains from ex post income redistribution from the well off to the poor, given the declining marginal utility of income. In the run-of-the-mill transitions case, transitions losses are unlikely to be great enough to generate a powerful case for ex post income redistribution on welfarist grounds. Where ex post income differentials between winners and losers are very great (*cf.* Bert in the ditch, about to die from want of money to pay for medical care), the very strong welfare gains from bailing out Bert ex post may well outweigh the welfare costs from distorting incentives of future Berts to take adequate precautions in like situations. At least, the welfarist is willing to ask the question whether this might not be so. The luck egalitarian, on the other hand, has no basis in the internal logic of luck egalitarianism for showing like mercy.[70] This difference seems to me to count strongly in welfarism's favor.

All of this is to reiterate the point noted above: that the premises of welfarism do not commit one a priori to an ex ante perspective. That perspective reflects a strong emphasis on disincentive effects for the chooser, which itself rests on an empirical hunch about the extent to which human behavior is deliberate, rational, etc. In a world of complete determinism (social or otherwise), incentive effects would be irrelevant, and with it ex ante perspective; the case for ex post compensation would stand or fall on transactions costs, welfare gains and losses from changes in the relative income levels of winners and losers through ex post lump-sum compensation, etc. That is obviously not the world we live in. But if—as I suspect—the world we actually do live in is somewhat closer to a deterministic (or at least irrational) one than the strong rational expectations model assumes, the case for ex anteism on welfarist grounds may be concomitantly weaker as well.

---

70. Of course, luck egalitarians can accommodate it by abandoning luck egalitarianism for welfarism when the former seems, as one proponent of such a mixed scheme put it, "unduly harsh in its noncompensation of extremely bad option luck." Vallentyne, *supra* note 15, at 556.