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on life

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Lorraine Daston

Life, chance & life chances

Like all men in Babylon, I have been proconsul; like all, I have been a slave. I have known omnipotence, ignominy, imprisonment . . . I owe that almost monstrous variety to an institution – the Lottery – which is unknown in other nations, or at work in them imperfectly or secretly.

– Jorge Luis Borges, “The Lottery in Babylon”

The principles of justice are chosen behind a veil of ignorance. This ensures that no one is advantaged or disadvantaged in the choice of principles by the outcome of natural chance or the contingency of social circumstances. Since all are similar-

ly situated and no one is able to design principles to favor his particular condition, the principles of justice are the result of a fair agreement or bargain.

– John Rawls, *A Theory of Justice*

These two social fantasies, the Borgesian lottery and the Rawlsian veil of ignorance, seem to be poles apart: the one seeks to maximize the role of chance in social arrangements, the other to minimize it. The people of Babylon are subject to the most dizzying reversals of fortune; the only regularity in their lives is the ordained drawing of lots that will once again reshuffle their fates, for better or worse. “If the Lottery is an intensification of chance, a periodic infusion of chaos into the cosmos, then is it not appropriate that chance intervene in every aspect of the drawing, not just one?”¹ No society could contrast more starkly with Borges’s Babylon than Rawls’s polity of fairness, in which differences in citizens’ “initial chances in life” are branded as “especially deep inequalities,” which justice must alleviate.²

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1 Jorge Luis Borges, “The Lottery in Babylon,” *Collected Fictions*, trans. Andrew Hurley (New York: Penguin, 1998), 104.

2 John Rawls, *A Theory of Justice* (Cambridge, Mass.: Harvard University Press, 1971), 7.

Yet like all polar opposites, Borges's lottery and Rawls's veil of ignorance are plotted along the same conceptual axis. Both envision life in terms of chances – and moreover, chances that are symmetrically distributed. The Borgesian Babylon may be nightmarishly chaotic, but the lottery that rules it is fair. Everyone has been proconsul; everyone has been a slave. Fairness – not prosperity, not happiness, not achievement – is also the fundamental intuition that undergirds Rawls's imagined social contract. Our society may be poor or rich, barbaric or highly cultivated, light-hearted or melancholy, but whatever its resources and aspirations, we are all in it together. Ideally, you and I should have the same prospects, the same number of tickets in the lottery, the same life chances. If not everyone becomes proconsul, not everyone a slave, it is only because Rawls has qualified his distribution of life chances as “initial” rather than lifelong. At least at the beginning of life, every infant in a Rawlsian society should have an equal chance of becoming (to update the possibilities) president or street person. It is, of course, Rawls's hope and claim that precisely this symmetry of possibilities – not benevolence or charity – will motivate all members of society to ameliorate the condition of the worst off: this could happen to you, or to your children.

There is nothing self-evident about conceiving of life as a kind of many-sided fair die, rolled at every birth or at intervals almost as regular as the drawings of the Babylonian lottery (e.g., the neighborhood one happens to grow up in, the schools one attends, the well- or ill-starred marriage, the healthy or ailing children). On the contrary, most societies have imagined lives as ordered from birth (or perhaps even before), whether by inexorable fate, the cycle of

reincarnation, or divine providence. The life of Oedipus was foretold, as was that of Jesus. Lesser lives, though not dignified by oracles or prophecies, were also thought to unfurl according to some global plan. These lives are hardly fair – why should Oedipus, much less all of Thebes, be punished for crimes he committed unwittingly? – but they are just, according to an ideal of justice that is cosmic rather than individual. No doubt fairness is as ancient and universal a human value as justice, but the notion that they coincide is historically and culturally rare, and perhaps distinctively modern.

This is not to say that the role of chance in human affairs has not been recognized and thematized in many cultures besides our own. The wheel of fortune is a very old motif, carved into the stonework of medieval cathedrals and flamboyantly rendered in Renaissance paintings. With each spin of the wheel, kings and beggars trade places. In some traditions, including ancient Judaism and early medieval Christianity, chance mechanisms like the cast of dice or the drawing of lots were used for divination; in others, such as Hinduism, the gods themselves gamble.

But chance *per se* is never normative in these examples. Fortuna is a powerful goddess, but it is Justitia who commands the moral high ground. Philosophy consoled the much-tried Roman scholar and statesman Boethius by revealing that true wisdom lay in spiritual indifference to the caprices of fortune (in his case, imprisonment and impending execution on a trumped-up charge of treason): in Boethius's allegory, Dame Philosophy bests Fortuna, wheel and all. The use of dice, lots, and other aleatory devices to plumb God's will when a consequential decision loomed (see, for example, Numbers 33:54 or Proverbs 16:33)

was frowned upon by theologians at least since Augustine, precisely because such expedients forced God to rush in in order to contravene chance: a “temptation of God.” And the gambling Hindu gods routinely cheated, the stakes being too high to leave the game’s outcome to chance. In all cases, chance is invoked only to be overcome – by philosophical transcendence, divine intervention, or plain old stacking the deck. Life is full of contingencies, fortune and misfortune. But life itself is not, should not be, conceived as a chance, a life chance in a colossal lottery. As the narrator of Borges’s short story about the Babylonian lottery observes: “I have known that thing the Greeks knew not – uncertainty.”³

How did the metaphor of life chances come to be so irresistible, at least for modern societies like our own? And what does the symmetric distribution of such chances have to do with justice? The first question is historical, the second philosophical. But they illuminate one another, or so I shall argue. The intuition that justice depends on equalizing individual life chances depends crucially on the conceptualization of life in terms of chances – rather than as destinies, fates, providences, grace, or works. Life chances are not synonymous with chaos: a lottery has a well-defined structure specified by explicit rules. But life chances fall short of a plan, whether laid out for the individual or the cosmos. To think of one’s life in terms of life chances is to admit, however reluctantly, ineluctable contingency. A fistful of lottery tickets cannot guarantee the prize with certainty; sometimes a single ticket suffices to win the jackpot. Life chances presume a world of statistical regularities, orderly but not determined.

Like all statistical regularities, life chances apply in the first instance to populations, not individuals. The paradigmatic way of assessing life chances is the table of mortality, which plots many deaths as a function of some other variable: age, sex, profession, lifestyle, or any number of other factors thought to influence longevity. The table of mortality serves as the basis for estimating the most fundamental of all life chances – life expectancy. Thanks to the World Health Organization, we are accustomed to reading about life expectancy as a function of nationality – for example, 73.0 years for a newborn in Sweden versus 25.9 years for one in Sierra Leone. But nationality is only one of many possible groupings into which life chances may be parsed. Epidemiologists may prefer grids that divide the world up into city and country dwellers or the thin and the fat; sociologists draw the lines according to income level, sex, race, or level of parental education. Furthermore, life chances pertain not only to quantity but also to quality of life: enjoyment of civil liberties, safety from violence, access to the beauties of nature and art. However defined and assessed, life chances apply to *categories* of people.

The conceptual preconditions for thinking in terms of life chances are therefore twofold: the notion of statistical regularities, and the belief in the existence of homogeneous categories of people to which the regularities apply. Neither is intuitive. Long after statistics began to be systematically collected in the eighteenth and nineteenth centuries, first concerning births and deaths and eventually concerning everything from crime rates to volume of trade, their regularity continued to be a source of astonishment to mathematicians, social thinkers, and the lay public alike. How amazing that almost the same number

3 Borges, “The Lottery in Babylon,” 101.

of Englishmen committed suicide annually, year in, year out; ditto for the number of letters that landed each year in the Parisian dead letter office.⁴ How could such eventualities, each so entangled in a myriad of particular circumstances, become so predictable when regarded *en masse*? Whereas we tend nowadays to be struck by the gap between the statistical regularity that applies to a group and the actual fate of a particular member of that group (e.g., the chain smoker who lives to a ripe old age free of lung cancer or heart disease or any of the other ailments strongly correlated with tar and nicotine), nineteenth-century writers on statistics pondered the apparent contradictions between individual free will and the iron determinism of statistical 'laws.' How could the suicide of, say, Goethe's young Werther really be his own decision, if the suicide rates remained constant for decades on end? That is, their attention was arrested by the regularities, then so novel and surprising, whereas ours is snagged by the exceptions, now so contrary to our expectations.

The belief in the homogeneity of populations was, if anything, still more hard-won. In order for a national census to make sense, it is the nation – not, for example, the three Old Regime orders of clergy, aristocracy, and commoners – that must be accepted as the primary unit of social classification. There is no point in counting the members of a statistical reference class unless one is first convinced that they in fact possess enough commonalities to constitute a class, as opposed to a miscellany. The word 'constitute' is used here advisedly: the decision to create (or destroy) such

category-cementing homogeneities was often a matter of political will, as in the case of the U.S. Constitution. Article I, Section 2, dictated that a national census be taken every decade in order to determine the number of representatives each state may elect to the lower house of Congress, thereby calling into being a homogeneous class of those with a right to political representation (if not to suffrage, as in the case of free but disenfranchised women). In stipulating the fraction (three-fifths) for which each slave would count in the census, the same article also proclaimed the limits of homogeneity. It is no accident that the gathering of state statistics on a large scale coincides historically with the French and American Revolutions and the concerted nation building of the first half of the nineteenth century, both of which redefined the categories of putative homogeneity and heterogeneity. Nevertheless, the rubrics under which various national governments collect statistics remain quite diverse, sometimes to the point of incommensurability (a major headache for European Union or United Nations statisticians charged with devising a collective scheme for all member states).⁵

Even categories of 'natural' homogeneity may be devilishly difficult to discern, as epidemiologists well know: does it make more difference to life expectancy, for example, if one (a) is female, (b) is a vegetarian, or (c) lives next to a large oil refinery? The crisscrossing influences of natural and political categories (who has no choice but to live next to the oil refinery?) can be mind-bogglingly complex. Moreover, the political constitution of categories, as in the Ameri-

4 Theodore M. Porter, *The Rise of Statistical Thinking, 1830 – 1900* (Princeton, N.J.: Princeton University Press, 1986), 151 – 170.

5 Alain Desrosières, *The Politics of Large Numbers: A History of Statistical Reasoning*, trans. Camille Naish (Cambridge, Mass.: Harvard University Press, 1998), 236 – 278.

can case, can have long-lived consequences for every aspect of life chances, including the so-called natural ones of morbidity and mortality. Race continues to be a relevant category in American medical journals, just as caste might be in India, despite recent attempts to deconstitute these categories.⁶ If politically constituted categories are woven into the fabric of daily life – jobs, neighborhoods, diet, schools, medical care, pollution levels, even laws – they can transmute social homogeneities into bodily ones. Whether categories are defined by race, class, caste, religion, ethnic group, or sex, they are fraught with consequences for health as well as happiness.

Once the ideas of statistical regularities and homogeneous reference classes to which they apply are firmly in place, it is possible to conceive of biographies in terms of life chances and society as a vast lottery, even if it functions ‘imperfectly or secretly.’ Depending on the circumstances in which one happens to be born – in times of peace or war, feast or famine, as boy or girl, prince or pauper – one’s life chances will rise or fall. This way of thinking has become habitual; we know at a glance from the statistics how the life chances of infants with the same birthday will differ, depending on whether they are born in the Congo or in Taiwan, on a farm or in a metropolis, to literate or illiterate parents. We can also play the game retrospectively: history teachers know that the quickest way to cure students of a Miniver-Cheevy-esque romanticism about times of yore is to show how overwhelmingly more probable it was that any given person taken at random in medieval Europe would have been a drudging peasant rather than a gallant knight or damsel (a

calculation of life chances conveniently ignored by most fantasy computer games of the “Dungeons and Dragons” sort).

It is worth pausing a moment to measure the moral magnitude of this relatively recent conceptual change, the advent of life chances. When an individual or family is repeatedly beset by major misfortunes, most, perhaps all, cultures consider this a matter requiring explanation and justification: Why must Job suffer? Where is the justice in his terrible trials? More pointedly, what has he in particular done to deserve such torments? In a culture accustomed to thinking in terms of life chances, it is a violation of probabilities that prompts these questions. A woman whose husband had died at age thirty-five from a rare form of leukemia describes her reaction when her eight-year-old daughter was diagnosed with the same fatal disease as a “reverse lottery moment”: “When the doctors told me – using that phrase, ‘millions to one against,’ along with others such as, ‘No other reported cases in the world,’ and, sadly, gently, ‘The outlook isn’t good’ – I started screaming as if drowning out the words would stop them from being real.”⁷ Conversely, the more probable the affliction, according to the calculus of life chances, the less pondering about its meaning, although the suffering is in no way diminished. Members of a culture schooled in thinking about life chances certainly retain notions of just desserts – why do bad things happen to good people, and vice versa? – but the intensity with which the question is posed is now modulated by degrees of probability.

This acquired habit of thinking in terms of differential life chances does

6 Ian Hacking, “Why Race Still Matters,” *Dædalus* 134 (1) (Winter 2005): 102 – 116.

7 Lindsay Nicholson, “It Could Be You,” *The Guardian*, May 27, 2006.

not in itself, however, imply an associated sense of injustice concerning their distribution: it requires a further step in reasoning and feeling not just to register that life chances differ, but also to wax indignant over that fact. It is not difficult to imagine and indeed to instantiate societies that take differential life chances for granted or that offer a rationale for them. An individual may be rewarded or punished for deeds in a previous life, or the well-ordered cosmos may require a great chain of being, in which every creature knows its place, high or low, in the hierarchy. In *The Republic*, Plato defines justice as exactly this sort of hierarchical order, in which the brazen, silver, and golden classes each fulfill its appointed tasks. Liberal visions of meritocracy permit much more social mobility than Plato's ideal society did, but also accept stratification in life chances as inevitable, perhaps even desirable. How does inequality in life chances, especially initial life chances, come to be seen as a scandal?

Key to presuppositions about equality, including equality of initial life chances, is a slow but steady process of philosophical generalization about the nature of personhood: who can be a person, and what does being a person imply in terms of rights and duties? This is a fascinating and convoluted history that has proceeded by fits and starts, with several episodes of retrogression, and that is by no means concluded. The metaphysical foundations of personhood have repeatedly shifted, from the possession of a rational soul (wielded by sixteenth-century theologians at the University of Salamanca as a mighty argument against the Spanish crown's putative right to exercise dominion over the lives and property of the indigenous peoples in conquered New World territories) to rights guaranteed by Nature (as claimed by the

"*Droits de l'homme et du citoyen*" propagated by the French Revolution in 1789) to intrinsic human dignity (as invoked by the United Nations Declaration of Human Rights of 1948). They are probably shifting once again, in the context of debates over the rights of animals, forests, and perhaps the entire planet.

However motley the metaphysics of personhood, the direction of its evolution, when viewed over centuries, has been unambiguously expansive. Ever more people (and perhaps other beings as well) have been granted the status of full moral persons. The broadening of suffrage rights in the political realm has roughly paralleled this process: first property-owning white males, then all white males, then all males, then males and females. Arguments concerning personhood are admittedly more complex and subtle than those concerning suffrage: there is more to being a moral person than the right to vote. But both moral and political arguments have proceeded in tandem, along the track paved by analogical reasoning: if x is like y in all essential respects, then whatever rights are accorded to x should in justice be accorded to y . Once the analogy is acknowledged, inequality becomes indefensible.

Of course, everything hinges on the meaning of 'essential' in these analogical arguments. The overall tendency – again, a simplification of a long, halting, and meandering historical development – has been to abstract one individuating trait after another from the definition of essential personhood. Although some of these particulars may seem now to inhere in a social group rather than in an individual, they have historically been felt to be intrinsic to their possessors: noble blood, Jewish faith, French citizenship. This is still more the case for characteristics commonly understood

to inhere in individuals: myopia, mathematical genius, red hair, a pleasing baritone, six toes on one foot. None of these traits, and millions more like them, now count as essential to personhood. Personhood stands opposed both to the cultural and biological dimensions along which individuality is currently defined. On the one hand, there are the cultural components of identity, which are as various as the cultures that form them: ethnicity, sexuality, religion, region. On the other, there are the genetic endowments that are recombined with every act of sexual reproduction. Personhood deliberately ignores all of them as irrelevant to the moral self (though not to almost any other kind of self).

What is the essence that is left when all the individual contingencies of identity are subtracted? This is a matter still fiercely debated: A capacity for reason? An ability to feel sympathy for other persons? A central nervous system? However, if ever, the debate is resolved (and if history is any guide, any resolution is likely to be temporary), the result will be to insist on the strict moral equality of all genuine persons, regardless of what defining essence they are all thought to share. This conclusion holds for utilitarian as well as for deontological ethics: whether one believes that all persons are ends in themselves or that the good of the few can under some circumstances be sacrificed for the good of the many, no one kind of person counts for more, is a higher end than any other. Personhood is at once the most inclusive and the least homogeneous of human reference classes, but it is also the most important, at least as far as justice is concerned. We persons are all in this together: under these circumstances, fairness and justice converge.

Statistical regularities, homogeneous reference classes to which the regulari-

ties refer, and the ethically paramount and ever more capacious reference class of personhood: these are the conceptual preconditions not only for thinking in terms of life chances but also for using life chances as a tool to think about justice. It should be noted that the lottery ensures equal chances, but not equal lives. Indeed, to use a lottery to achieve fairness only makes sense if the lots – in this case, the kinds of lives actually led – are of unequal desirability. If human life is something like a lottery, then everyone ought to have a fair chance, an equal chance.

But *should* human life be something like a lottery? Who would want to live in Borges's Babylon? The discovery of statistical regularities has drawn some of Fortuna's sting: no life is certain, but neither is any life entirely uncertain. The same probabilities that make the modern insurance industry profitable also dampen the wilder oscillations of life chances, at least at the level of large reference classes. What might be called steady life chances – ones that are highly skewed (i.e., so large or small as to be all but certain in practice) and display little variation over long periods – are characteristic of orderly societies. Predictability in and of itself need not be desirable: steady life chances may be grim (e.g., seasonal storms that every year destroy lives and homes) as well as gladsome (e.g., a high probability that all children will survive to adulthood). Nonetheless, it is a characteristic aspiration of modern societies to increase predictability by subjecting ever more aspects of human life to planning and, if possible, to control. The chanciness of life chances is under sustained attack.

Although the ideal served by these concerted attempts to eradicate contingencies has yet to be articulated with the force and clarity of Borges's lottery

or Rawls's "original position," its outlines can already be discerned. Not only equality of life chances, but equally stable life chances for all would be its goals. In liberal polities, stability will be equated with individual control; in more étatist regimes, some centralized authority will hold the reins. Obviously, the decision as to who does the controlling, and how, will be politically and socially hugely consequential. But the main point here is the indomitable will to control, to straiten statistical regularities into near-certainties, however this goal is achieved. If 'transparency' has become the cardinal political virtue in modern democracies, 'control' is well on its way to becoming the chief desideratum of the personal realm. It is as if the ancient Aristotelian preference for activity over passivity had joined forces with the Kantian creed of autonomy over heteronomy to advance the triumph of control over contingency: lives should no longer be allowed to happen; they should be 'proactively' chosen and arranged, from cradle (or before) to grave (or after). Just as the appearance of new forms of insurance betokens a magnified sense of responsibility (e.g., insurance against property damage caused by one's children, now common in some European countries), so new possibilities of control expand the sphere of deliberation. Yet however impressive the current possibilities for control over the happenstances of life may be, they are dwarfed by the public appetite for still more control over ever more accidents, from the trivial (the shape of one's nose) to the momentous (the sex of one's child).

There are so many accidents with consequences so obviously grievous for those who must suffer them that it is impossible not to sympathize with efforts to control their incidence and effects. Among these are epidemics,

disasters both natural and manmade, war, and poverty. Because of the happy fact that at least some of the world's population is spared these scourges, it becomes part of the program to equalize life chances to try to eliminate or at least reduce the risks for everyone else. But the zeal for control has spread beyond woeful accidents to *all* accidents. To exercise 'control over one's life' has become perhaps the paramount goal of the well-off, well-educated, and well-placed minority who have already fared better than most in life's lottery. It is a slogan emblazoned on the covers of self-help manuals and built into the design of international hotel chains and restaurants, which advertise their uniformity. For those who yearn for control, to be surprised, however innocuously, is to be ambushed by life. Their ambitions resemble those of the ancient Stoics and Epicureans only in part. The ancient philosophical sects sought to overcome chance by cultivating indifference, *ataraxia*, to everything then subject to the caprices of Fortuna. In contrast, the modern cult of control is anything but indifferent to what Fortuna dispenses and instead seeks to stop the wheel, once and for all.

These efforts are most in evidence in the realm of new reproductive technologies, because remarkable advances in biology have not only made new techniques of control possible, but also presented the process of reproduction as a game of chance for the unborn, analogous to the lottery of initial life chances for newborns. Since the discovery of the structure of DNA and the deciphering of genetic codes, sexual reproduction has come to be understood as a bold experiment in accelerated evolution. Instead of manufacturing progeny identical to their parents by mitosis, as many microorganisms do, organisms that reproduce sex-

ually vary the genotype with each new conception. Each offspring is therefore a surprise, a new (and, given the enormous number of possible combinations of genes, probably also unique) individual. Variations produced by the occasional mutation are richly supplemented by the diversity of each successive generation; natural selection thereby has more materials to work on. In his aptly titled book *The Game of Possibilities*, biologist François Jacob described sexual reproduction among humans as “one of the principal motors of evolution”: “Diversity is one of the great rules of the biological game. In the course of generations, those genes that form the patrimony of the species unite and separate to produce those combinations, each time ephemeral and each time different, which are individuals.”⁸ Life itself is a grand lottery.

Jacob took a dim view of cloning and indeed of all attempts to reduce diversity, cultural as well as biological, because they impoverished species ‘patrimony.’ Less diversity brings an increase in collective risk (e.g., of being wiped out by a virus to which no one happens to be immune) and also in general monotony. But for those who consider chance itself to be a scandal, to formulate reproduction in terms of life chances is to invite attempts at control, inevitably less inventive and various than the play of combinations and permutations would be.

The party of control may well retort: why should natural processes dictate human choices? Isn’t anxiety about cloning or designer babies simply another version of the naturalistic fallacy, setting up Nature (writ large) as the standard of the Good, the True, and the

Beautiful? Worse, isn’t the revulsion sometimes evoked by genetic technologies just the reactionary reflex that opposes all change, the same reflex that once resisted smallpox inoculation and birth control? There is some merit to these arguments. But countervailing arguments must be weighed as well. Even those who reject naturalism in morals may uphold biodiversity on utilitarian and aesthetic grounds: if the results of elective cosmetic surgery to date are any indication, human control over the genotype is more likely to narrow than broaden the spectrum of variety. And even those who do not believe in providence may nonetheless find cause for rejoicing as well as regret in the contingencies doled out by the life lottery. Many events can throw the best-laid plans into disarray: a move, an illness, a love affair, a death, and, above all, the birth and care of a child, that great randomizer of human affairs. Some contingencies may end in sorrow, others in joy, but almost all result in the discovery of something not known and not felt before. To query control is to query the reach of the human imagination and foresight. Can we, will we, rival the ingenuity, the novelty, the surprises of chance? Can we simulate the power of contingency to teach, to test, and to enlarge experience – can any educational curriculum replace a curriculum vitae?

The project of equalizing and improving life chances is a noble one and still a long way from completion, as a glance at tables of life expectancy worldwide suffices to show. But it should not be confused, as it too often is, with the elimination of chance in life. Fairness does not imply certainty. The moral repugnance for contingency runs deep: chance severs the link between past and present, intention and outcome, virtue and reward, vice and punishment. Above all,

⁸ François Jacob, *Le jeu des possibles* (Paris: Fayard, 1981), 127–128; my translation.

chance seems to empty life of meaning: better to believe in an angry god than a senseless streak of bad luck. Yet chance can also act as a catalyst to the making of new meanings, both for individuals and whole cultures. New orders – philosophical, political, artistic, scientific – are invented to encompass the contingencies history has thrown up. Chance disrupts tidy lives, unsettles habits – and taps unplumbed resources, both personal and social.

There is no getting around the fact that chance always implies risk. Some contingencies will be tragic, with outcomes not even Dr. Pangloss could redeem. The urge to control is an understandable and often laudable response to real danger. In its ancient version, the will to control was turned inward on the self: to conquer fear meant cutting ties of yearning and affection for anything and anyone subject to the vicissitudes of chance. The modern version is turned outwards toward the world, but it too is driven by fear. Strangely, the spectacular successes of some modern societies in making many aspects of life more secure has only made their citizens that much more fearful. For decades, experts and politicians have discussed the nature and level of acceptable risk, with all parties in tacit agreement to the assumption that an ideal society would be as risk-free as possible. If risks were to be tolerated, it was only because they were either inevitable or the cost of avoiding still more dreaded risks, and in both cases the compromise was a matter for regret. According to the conventional wisdom of risk management, the only good risk is no risk.

A debate has yet to be joined about how much chance, how much risk, is not only tolerable but necessary and desirable for a life of learning and discovery. Which life chances are unbearable – lots no one should have to draw – and which

ones can be borne for the sake of experience and experiment? All-or-nothing outcomes – either everything under control or everything left to chance – are nonstarters. The debate must assay possibilities, probabilities, and desirabilities with a jeweler's balance.

This would also have to be a debate about the philosophy of fear, traditionally the most unphilosophical of the passions. Accepting life chances entails more than demanding a fair chance in a lottery, whether Borgesian or Rawlsian. We would also have to accept – not eradicate – a modicum of fear. But perhaps fear selectively and candidly confronted would take on a different aspect from the panicky, inchoate fear that robs us of reason and humanity. David Hume shrewdly observed that in situations of perfectly balanced uncertainty (fifty-fifty chances of a positive or negative outcome), fear preponderates over hope.⁹ His observation still holds true for some of the most secure societies with the most favorable and equally distributed life chances humanity has ever known – these are precisely the societies that create and consume a dazzling array of insurance policies.¹⁰ The ability to calculate risk, even to control it, has not tipped the balance in favor of hope. On the contrary: the most secure societies seem by and large to be the most timorous, the most cowed by the prospect of future danger, whether probable or improbable. Will facing up to fear as the price of chance restore hope to its at least equal rights in our expectations?

9 David Hume, *A Treatise of Human Nature* [1739], ed. L. A. Selby-Bigge (London: Oxford University Press, 1968), II.iii.9, 447.

10 Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton, N.J.: Princeton University Press, 1988), 182 – 187.