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Shipwreck with Speculator

Early Modern Representations of Risk and Gambling

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Charles Cotton's *Compleat Gamester*, one of the best known manuals accompanying a virtual pandemic of gambling fever across early modern Europe, likens gaming to shipwreck since there are "but few Casts at Dice betwixt a rich man and a beggar," "but few inches between [living] and drowning." This conjunction of shipwreck and gaming recurs in early modern literature and constitutes a rhetorical topos in the sense of philosopher Hans Blumenberg. I examine several instances of this conjunction (e.g. in Cardano's autobiography, Shakespeare's *The Tempest*, Spinoza's *Theological-Political Treatise*, and Joseph de la Vega's *Confusion de Confusiones*) and suggest that the conjunction can be understood according to Ian Hacking's thesis on the contemporaneous development of probability theory.

Keywords: probability, speculation, risk, rhetoric, early modern period

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I. Bulls and Bears

One of the timeliest and most prescient books I've come across in the last fifteen years is Edward Chancellor's popular history of financial speculation *Devil take the Hindmost*. Chancellor had worked as an investment banker for Lazard Brothers in London and had contributed to the *Financial Times* and *The Economist* and so was well acquainted with what he called "This Bubble World" (3), echoing the poet Francis Quarles's seventeenth-century work *Emblems*.

"What's lighter than the mind," Quarles asked, "A thought. Than thought? This bubble world" (qtd. in Chancellor 3). Chancellor's pleasant book itself is "light" reading, certainly not a work of philosophy, as I had been used to, with its dizzying arguments, something less than that as a thought is less than the mind. And yet not quite a scholarly history, where ideas take on the dramatic role of players, something less than that. What is less than that? The thing called speculation and our derivative world of modernity.

For all intents and purposes, Chancellor's book starts with the seventeenth century and Joseph de la Vega's *Confusion de Confusiones*, the first description of stock market activity in Western Europe in 1688 (11-14). After brief remarks about the scant classical and medieval precursors, Chancellor presents stock market speculation as bursting onto the scene fully formed, like some early modern Athena from the head of Zeus. And it's telling that Chancellor is most concerned with the speculative psychology as presented in de la Vega's work, which approximates what we nowadays call manic-depression (13). The compulsiveness, the superstitions, and even the bulls and bears were there from the beginning, he says, "the *liefhebbbers* ('lifter's up' . . .) who were 'scared of nothing'" and "the *contremines* ('underminers' . . .), who were 'completely ruled by fear, trepidation, and nervousness'" (Chancellor 12). Certainly some (if not most) of the participants vacillated between the two, "exhibit[ing] signs of split personality" (Chancellor 12). Indeed, de la Vega himself had observed that "there are many occasions in which every speculator seems to have two bodies, so that astonished observers see a human fighting himself" (qtd. in Chancellor 12).

To Chancellor, this recalled nothing so much as the behavior observed by Charles Cotton in his *Compleat Gamester*, first published in 1674 and again in 1680 (11). As the epigraph to Chancellor's preface makes clear, speculation is nothing but gambling. Sir Ernest Cassell, banker to Edward VII, recalled that "when I was young, people called me gambler. As the scale of my operations increased, I became known as a speculator." "Now I am called a banker," he says, "but I have been doing the same thing all along" (qtd. in Chancellor ix).

As a fellow at UNLV's Center for Gaming Research, I had privileged access to Special Collections which included a second edition of Cotton's manual. David Schwartz, in his wonderful history of gambling, tells us that the field of "how-to" books had been opened initially by Cardano but in the seventeenth century the market had exploded with French gambling manuals appearing as early as 1647, English translations in 1651, and then English manuals proper (167). I am particularly taken with certain passages from the first chapter of Cotton's volume, "Of Gaming in General," in which he describes the "miserable Gamester" (3).

"This restless man," he says, "is the proper subject of every man's pity. Restless I call him, because (such is the itch of play) either winning or losing he can never rest satisfied, if he wins he thinks to win more, if he loses he hopes to recover" (Cotton 3). "Thus," Cotton writes, "have I heard of some who with Five pounds have won Four Hundred pounds in one night, and the next Night have lost it to a sum not half so much; others who have lost their estates and won them again with addition, yet could not be quiet till they lost them irrecoverably" (3). Indeed, "gaming hath this ill property above all other Vices, that it renders a man incapable of prosecuting any serious action, and makes him always unsatisfied with his own condition," for "he is either lifted up to of mad joy with success, or plunged to the bottom of despair by misfortune, always in extremes, always in a storm" (1).

This talk of restlessness, confined here to the gamester, recalls certain moments from the history of philosophy. Consider Spinoza, for instance, the philosopher of Amsterdam, and his *Theological-Political Treatise* published anonymously in 1670 and then posthumously in 1677, contemporaneous with Cotton's *Gamester* and roughly ten years before de la Vega's *Confusiones*. The *Treatise* begins by claiming that "men would never be superstitious, if they could govern all their circumstances by set rules, or if they were always favoured by fortune," seeming impossibilities (Spinoza 3). "But," he continues, as it is,

being frequently driven into straits where rules are useless, and being often kept fluctuating pitiably between hope and fear by the uncertainty of fortune's greedily coveted favours, they are consequently, for the most part, very prone to credulity . . . especially when hope and fear are struggling for mastery. (Spinoza 3)

Spinoza jokes that everyone recognizes this as fact about his neighbor—not himself, of course—for everybody knows that "most people, when in prosperity, are so over-brimming with wisdom (however inexperienced they may be), that they take every offer of advice as a personal insult, whereas in adversity they know not where to turn, but beg and pray for counsel from every passer-by" (3).

Notice the similarities between Cotton's gamester, Spinoza's average joe, and de la Vega's stock operator: the extremes of joy and despondency, the winner's restless "hope" (or greed) that his winnings will increase indefinitely and the flail-

ing loser who will not satisfied until he lose it all irrecoverably, the illusion of complete self-sufficiency followed by the illusion of wretchedness, the ultimate bad beat, casting about for saviors on every corner. “Always in extremes,” Cotton writes, “always in a storm.” “The proper subject of every man’s pity” is himself, along with the rest of us, for we are all speculators on the verge of wreck. We are all in the exact same boat.

II. Looking on the Wreck

I want to talk about ships and storms for a moment. After Cotton’s discussion of the restlessness of gamblers, he concludes the following: “And therefore fitly was that question propounded, *Whether men in Ships at Sea were to be accounted among the living or the dead, because there were but few inches between them and drowning*” (3). “The same [inquiry] may be made of great Gamesters,” he casually adds, “though their estates be never so considerable, Whether they are to esteemed poor or rich, since there are but few Casts at Dice betwixt a rich man (in that circumstance) and a beggar” (Cotton 3).

Cotton’s original audience may have been reminded of that great shipwreck, *The Tempest*, originally performed in 1611, first printed as the opening play of Shakespeare’s collected works in 1623, and then radically revamped by Davenant and Dryden in 1667 (published three years later). The play begins at sea in the middle of a storm. A ship is carrying Alonso, the king of Naples, his brother, and other nobles. The opening lines, however, are not spoken by a noble but by the master of the boat, who basically hands over control of the situation, what little there is, to his subordinate the boatswain. In the middle of the action, which is intense, the ship in serious danger of capsizing, the boatswain is interrupted (is repeatedly interrupted) by the noblemen, the king himself first of all.

The king asks where the master is, and the boatswain responds: “Do you not hear him? You mar our labour. Keep your cabins! You do assist the storm” (Shakespeare 144). Gonzalo, a wise old counselor, tries to quiet the boatswain down—“nay, good be patient” (Shakespeare 144)—but the sailor will have none of it: “When the sea is! Hence. What cares these roarers for the name of the king? To cabin! Silence!

Trouble us not” (Shakespeare 145). Gonzalo, still trying to smooth things over, cautions the man to remember his noble cargo: “Good, yet remember whom thou hast on board” (Shakespeare 145). Still frantically working, trying to keep the ship from splitting apart, the boatswain had enough: “None that I more love than myself” (Shakespeare 145). “You are a councilor,” he says to Gonzalo, “if you can command these elements to silence and work the peace of the present, we will not hand a rope more. Use your authority!” (Shakespeare 145). If you can command the sea and storm, he’s saying, then do it, if not “give thanks that you have lived so long and make yourself ready in your cabin for the mischance of the hour, if it so hap” (Shakespeare 145). If you can help, do it; if you can’t, get out of the way—go below and get ready to die.

The noblemen are shocked by the boatswain’s behavior and heap abuse on him: “A pox o’ your throat, you bawling, blasphemous, incharitable dog,” says Sebastian; Antonio shouts: “Hang, cur! Hang, you whoreson, insolent noise-maker! We are less afraid to be drowned than thou art” (Shakespeare 147). Everyone fears the worst, but Gonzalo, the wise, finds some comfort in the boatswain’s comportment: “I have a great comfort from this fellow. Methinks he hath no drowning mark upon him—his complexion is perfect gallows” (Shakespeare 145-146). Gonzalo thinks that the boatswain has a look of destiny about him and that the fate of someone so insolent as this cannot be an anonymous watery grave but rather must be the hangman’s noose. His destiny is not anonymity, but infamy, which is lucky for everyone else on the ship. “I’ll warrant him for drowning,” he says, “though the ship were no stronger than a nutshell and as leaky as an unstained wench” (Shakespeare 147). For “warrant,” the Arden Shakespeare cites the *Oxford English Dictionary*: to guarantee or ensure (a person something)—in this case, Gonzalo offers to ensure the mariner against drowning. Certainly, gamblers are familiar with Gonzalo’s practice, offering a player insurance against the unlikely event of his pocket kings losing to queens and the like. The wise man, in essence, thinks drowning so unlikely for the boatswain that he’s willing to assume the man’s risk. Of course if he’s wrong, then no one will be around to collect. Except that he *is* wrong, and they survive nevertheless.

One of the things that interest me about this scene is the way in which it brings together Cotton's two questions: whether men in ships were to be accounted among the living and the dead and whether the great gamesters at their tables are to be esteemed poor or rich. In the opening scene of the *The Tempest*, the moral seems clear: in a crisis, the confusion of a storm, when only a few timbers separate the living man from the dead, the social distinctions of everyday life count for very little or nothing at all. The boatswain, a poor man, is worth more than that paradigmatic rich man, the king (he is, ironically, worth more *to* the king than the king himself). Even the wisdom of a Gonzalo is for naught if he lacks the power over nature to go with it, if he cannot command the elements. But for the average joe of Spinoza's preface, who is so frequently driven to such straits: doesn't it seem that we are almost always in a crisis, always an inch away from disaster or, for that matter, glory?

In Cotton's description of the gamester, the two questions are simply placed side by side; in Spinoza's preface, the questions are enveloped, as it were, by the philosophical question—the situation of the mariner and the gamester are instances of a more general situation, that which the vast majority of people always or almost inevitably find themselves in; in Shakespeare's *The Tempest*, the questions of the mariner and of the gamester collapse into one scene, the wreck enacted before our eyes. So it comes as no surprise that de la Vega himself, before passing to a fuller description of bull and bear psychologies, speaks of the stock exchange environment as a “storm” threatening the operators' leaky vessel and then, a couple of paragraphs later, as a “gambling hell” (161-162). Indeed, de la Vega the operator will turn almost Shakespearean, collapsing gamester and mariner, at least those of whom are pathological, in one image: “Oh, how many sick persons are there in the stock-gambling who resemble the fool, who throw themselves into this sea [of speculation] and who, when the waters reach their necks, return to firm ground” (188).

III. The Bosom of Abraham

In some way, these representations derive from or at least recall the two parables of Lazarus. The first one, mentioned in Luke, is the parable of the rich

man, Dives, and the poor man, Lazarus. Completed in 1611, the King James Bible gives:

There was a certain rich man, which was clothed in purple and fine linen, and fared sumptuously every day. And there was a certain beggar named Lazarus, which was laid at his gate, full of sores, And desiring to be fed with the crumbs which fell from the rich man's table And it came to pass, that the beggar died, and was carried by the angels into Abraham's bosom: the rich man also died, and was buried; And in hell he lift up his eyes . . . and seeth Abraham afar off, and Lazarus in his bosom. And he cried and said, Father Abraham, have mercy on me, and send Lazarus, that he may dip the tip of his finger in water, and cool my tongue (Luke 16: 19-24)

Unmoved, Abraham concludes with a terrible moral: “Son, remember that thou in thy lifetime receivedst thy good things, and likewise Lazarus evil things: but now he is comforted, and thou art tormented” (Luke 16: 25). We are left wondering, like Cotton, whether the rich man, the great gamester in his royal purple, was to be esteemed wealthy in life or not, since Abraham can make Lazarus, who isn't, at least seemingly, presented here as a remarkably virtuous man—he's simply poor—since Abraham can make a king of Lazarus, a pauper of Dives.

It's an open question as to whether the Lazarus of Luke is the same Lazarus who is raised from the dead in John (most, I think, tend to separate the two). In this second story, the emphasis is not on riches versus poverty, but on health and life, on the one hand, and sickness and death, on the other; the emphasis is on a power that triumphs over sickness and death and that operates in *this* world, so that Lazarus is not raised on high, but instead restored to his earthly sister and family. There seems to be so little difference between death and life, in this world, that according to Martha, her brother Lazarus would not have died had Jesus been there—even so, he need only roll away the stone that blocks Lazarus's tomb in order to restore him (John 11: 1-44).

What is clear, though, is that in the seventeenth century people wanted also, perhaps increasingly, to see the rich man Dives become the pauper Lazarus and vice versa in this world. Schwartz notes that “with the introduction of bank games and the proliferation of professional gambling houses, a gambling mania swept over much of Europe . . . [and] that from

1650 to 1800 gambling occupied a place in European society far more prominent than before or since” (93). It’s true—there had always been gambling, but now “it was common on a level never before seen” (Schwartz 93). With the opening of the *Ridotto* in 1638, the first state-sanctioned public gambling house in European history, the state had found a way to capitalize on this fever. On the model of the late sixteenth and early seventeenth-century *ridotti*, where nobles no longer simply permitted gambling as before but actually profited from it by raking a portion of the money staked, the state cemented an unprecedented alliance with “mercantile gamblers, who ran games for profit, and government, who sought to legitimize the gamblers for purposes of public order and revenue enhancement” (Schwartz 95).

Europe had long had its carnivals, its saturnalia, with their Lords of Misrule and boy bishops. The world was temporarily turned upside down, the rich made poor and poor made rich, the noble made base and the ignoble gentile. All this was a temporary subversion of the social life, ultimately conservative of the status quo temporarily flaunted. But gambling at the *Ridotto* was like a carnival within the general carnival atmosphere, where these things weren’t just simulated, but where they happened for real. This was carnival gone wild, and it could be turned to the advantage of the state not only in its carnivalesque quality—that, for the most part, had been the case already—but this virtual storm, a mixture of “nobles, prostitutes, pimps, userers, police informants, . . . degenerate gamblers . . . [along with] curious visitors” (Schwartz 96)—this tempest could be turned to the State’s advantage in more ways than catharsis.

So if Spinoza’s average joe was “driven to such straits”—by the way, my rudimentary sense of the Latin text of the *Treatise* is that the translation “straits” is a perfect English word to capture the Latin, which literally means “narrowness,” including any narrowness of the sea or land, and which figuratively means, interestingly enough “poverty” (or a “pinch,” say). The language describing hope and fear is of these extremes “buffeting” the man, so the language even in Spinoza seems to hint of a possible shipwreck. One is driven into these dangerous straits, where he or she is likely to founder, wind-tossed by the extremes of hope and fear such that one is as likely to sink from the anxiety of it as from any rocks.

In any event, if Spinoza’s average joe was driven into straits where “rules” cease to command and in which one is buffeted by the extremes of hope and fear—if he was “*driven* to such straits,” it’s clear that in early modern Europe he was driving himself. And in droves. Extremes of hope and fear weren’t something to be purged, on the example of Aristotle’s theater, but rather something people were clearly seeking out. They didn’t want to be relieved from anxiety. They wanted to be anxious. Not only was this not threatening to the state, it was potentially enriching.

Another difference between the previous gambling and the kind now taking hold was the anonymity of the encounter in this sense: this new mercantile gambling “let people play against an impersonal house for the price of the house edge” (Schwartz 92). It was no longer the case that if you and I gamble and you win, I must lose, so that the effect of that encounter spills out of the gambling house. My foe at the *Ridotto* was not a fellow player, but rather the house, so that seemingly there’s really no particular person to blame, no one to resent, if I lose (other than myself, if I choose), but also no one to praise, no one to be indebted to, if I win (other than myself, if I choose). All this is really rather ingenious: it combines the impersonality of the firing squad with one bullet (no one knows who fired the fatal shot)—it’s *better* than the firing squad because no one in particular fires that fatal shot; it combines this with the impersonality of a Father Christmas—it’s *better* than a Santa Claus because the presents do not depend on my being naughty or nice since no one in particular is giving them. It is as impersonal and as amoral as a storm, and early modern people wanted to enact the wreck or, alternately, to look on from a safe distance.

With this last remark, I’m echoing the great twentieth century German philosopher Hans Blumenberg. In his first chapter from *Shipwreck with Spectator*, “Seafaring as a Transgression of Boundaries,” he asks:

What could have motivated the move from land to sea but a refusal of nature’s meager offerings, the monotony of agricultural labor, plus the addictive vision of quickly won rewards, of more than reason finds necessary (the latter being something the philosophically inclined are always ready to find a formula for)—the vision, that is, of opulence and luxury. (Blumenberg 9)

The idea, he adds, “that here, on the boundary between land and sea, what may not have been a *fall* but

was certainly a *misstep* into the inappropriateness and the immoderate was first taken, has the vividness that sustains lasting *topoi*” (Blumenberg 9).

IV. The Falling Sickness (or, the Storm Disease)

Almost from the beginning, the disease we call epilepsy was known sometimes as “the sacred disease” but consistently as “the falling sickness,” for obvious reasons. Hippocrates, Galen and Aristotle—the great ancient medical authorities—knew it as both. The influence of these three philosophers, chiefly Galen and Aristotle, continued to hold sway in Western medicine more or less until the mid to late sixteenth century, at which time their supremacy was challenged by a new breed of doctor, the hermetic medicine of Paracelsus and his followers. Nowadays, a lot of us, unjustly, think of Paracelsus as some sort of alchemist quack—he *was* an alchemist, but no crank. At the time, this “modern,” new-wave of medicine-men vied in a most serious way, on some fronts successfully, with the old guard.

And one of the most important, if not the chief battleground of that war was epilepsy (Temkin 172). The traditional medicine’s stunning lack of success in this area, its almost complete inability to offer effective treatments for this disease, much less cures—indeed, many within the tradition thought it incurable—this was a noticeable sore spot. Bernard of Gordon, for instance, summed up the resigned, traditional attitude nicely (and reasonably) when he admitted:

Nevertheless, I tell you, concerning epilepsy, that I have had in my treatment many people, young and old, rich and poor, men and women, suffering from almost every kind of epilepsy—Yet I have not one seen any one cured either by me or by another . . . [despite the fact that] I have been very careful in everything and the patients obedient. (qtd. in Temkin 165)

He concludes by cautioning physicians against making promises, for the falling sickness “is eradicated [only] with great difficulty—if indeed it can be eradicated at all” (qtd. in Temkin 165). In the words of Owsei Temkin, which recall Cotton’s remarks on the gamester, “the epileptic was therefore considered [among all] a poor wretch, deserving pity” (165). But Paracelsus and the new breed were not so resigned

and in fact accused the old guard of quackery. Doctors, Paracelsus wrote, who thrive on slight diseases which (basically) cure themselves, but pretend that the “falling sickness” is incurable are frauds, for God had provided remedies for all diseases (Temkin 171). Clearly, if the early modern hermeticists could succeed in this area where the old-guard always failed, then the upstart medicine could be legitimated in spectacular fashion.

It turns out that Paracelsus and his followers saw a very intimate link between storms and epilepsy. Indeed, thinking that man’s body was a microcosm mirror of the macrocosm as a whole, they reasoned that epilepsy was very literally a thunderstorm of the body, and that in order to understand it, we needed to think about how thunderstorms originate in nature and treat the disease, in large part, through chemical means (Temkin 173-174). In its insistence on the analogy between microcosm and macrocosm, hermetic medicine would decline in importance for subsequent medical tradition, but in its focus on chemical remedies, unprecedented at the time, the new medicine would be most influential indeed. But it’s really the former—the analogy—that’s most interesting to me. Here’s Paracelsus comparing a thunderstorm to epilepsy, the microcosmic fit:

When a thunderstorm is on its way, the weather changes, the animals notice it and become restless. So man too becomes terrified when he feels an epileptic attack approaching [the so-called “aura,” which predicted attack]. Then clouds gather in the sky, while man’s eyesight becomes weakened and he feels sleepy. Next comes the wind, sweeping everything away; in the epileptic, the inner wind makes his abdomen and neck swell. Now the thunder breaks forth, shaking heaven and earth; now the epileptic is convulsed in all his limbs . . . (qtd. in Temkin 174)

And finally, “a stroke of lightning break[s] walls and reduces everything to confusion—so the epileptic’s limbs are bent and even broken by the invisible storm and lightning in his body” (qtd. in Temkin 174), the body essentially imploding.

To the audience of the *The Tempest* in 1611, or such audience members who had a familiarity with medicine—and there were perhaps not a few—the shipwreck in certain ways would have been an enacting of an epileptic attack, in which the body, deprived of the guiding rational faculty or faculties (remember

the king being exiled below deck by the boatswain), moved spasmodically and chaotically. The confused cries of the sailors and everyone involved—we split! we split!—enacted an epileptic body folding in on itself, but also with an incredible release of energy: what must it have been like to look on this catastrophe, these extremes of hope and fear (joking Gonzalo, who is convinced that the destiny of the boatswain will save them; the mariners, who even before the “confused noise within” are wailing “All lost! to prayers, to prayers! All lost!”).

It would have resonated with Cardano, who wrote one of the first books, if not the first book on probability—it would have resonated with Cardano had he been there. His autobiography records the following:

In 1525, the year in which I became rector [of the University of Padua], I was almost drowned . . . Rather reluctantly I had boarded a craft which was transporting some horses for hiring. During the crossing, the main mast, the rudder, and one of the two oars with which the boat was manned, were broken by storm . . . and at length night overtook us. I reached Sirmione in safety after the other passengers had abandoned even their faintest hopes, and I was all but desperate. Had our embarkation been delayed but [a minute or so], we should have [all] perished. (Cardano 92)

Confessing his cowardice, the charming Cardano nevertheless sat down to eat a fish supper; his companions, on the other hand, had no appetite except, as one biographer notes, the youth “whose rashness led the party into danger, and whose courage found a safe way out of it” (Morley 66).

Apparently in Cardano’s mind the episode was linked to gaming, for immediately, in the next sentence, he launches into the following story: “Once when I was in Venice on the birthday of the Blessed Virgin, I lost some money while gambling; on the following day I lost the rest, for I was in the house of a professional cheat” (92). Cardano erupts in a rage and slashes the man’s face, though not deeply, he adds, but eventually he wins the money back, plus the rings and clothes he had lost previously, as well as most if not all of the “cheat’s” money. Cardano demands that the doors be unlocked, and “the master, seeing such a commotion and tumult in his household, and anxiously fearing every moment’s delay, I judge, because he had defrauded me in his own house with his marked cards, after making a rapid calculation of

the slight difference between what he had to gain or what to lose, ordered the door to be opened” (93). The master, the house’s man, knows that ultimately he has the advantage.

The storm and the gaming table, the shipwreck and the speculator: this has been an introduction to an overarching project I’m calling “An Illegitimate Child: Epilepsy, Gambling, and the Birth of Probability,” and I want to wrap-up by saying a few words about that project, for with Cardano we have clearly entered the world of probability—Cardano, who some speculate was himself an childhood epileptic since he reported recurring “visions” of “a veritable chaos of innumerable objects rushing dizzily along [before his eyes] *en masse*, without confusion among themselves, yet with terrific speed” (131-132).

V. Probability, the Illegitimate Child

My current research responds to philosopher Ian Hacking’s *The Emergence of Probability*, his touchstone on the subject. According to Hacking, no one could solve probability problems with any sort of consistency before the mid-seventeenth century because, for all intents and purposes, there was no concept of probability until that time, at least as we understand it. And so the task of the historian of philosophy is not to explain how earlier thinkers got it wrong but rather how getting it right or wrong became possible in the first place.

Modern probability is an essentially dual concept: on the one hand, epistemological (“having to do with degrees of belief”) and on the other hand, aleatory (concerning “devices tending to produce stable long-run frequencies”) (Hacking 12). As to the origins of such a concept, Hacking argues surprisingly (and in large part, in my opinion, convincingly) that probability is “a child of the low sciences, such as alchemy or medicine” (39) not the high theory of philosophy or mathematics. Probability’s emergence—variously spoken of as both a “birth” and a “mutation”—occurred through a transformation of the concept of the sign, the “chief concept” of the low sciences, into a new kind of evidence, “inductive” evidence (Hacking 38). Consequently, we must understand the role of the sign particularly in respect to early modern medical theory, which was dominated at the time by the alchemical tradition of Paracelsus and his followers,

because this hermetic matrix accounts for the eventual duality of probability even after its birth.

The concept of probability having emerged, the Port Royal Logicians were the first to measure it. To represent epistemic probability on a numerical scale, they used gaming as the model. “It may be tempting,” Hacking remarks, “to infer that probability could be measured only by using concepts devised for games of chance,” but “that would be a mistake” (85). The proof of this, in Hacking’s mind, is that Leibniz did so without any knowledge of the “doctrine of chances” (85). Gaming, Hacking implies, played only an incidental role in this transformation, which in part dispels the mystery of why probability emerged only in Europe in the seventeenth century when gaming is global and most ancient (2). The barbaric gambling context is simply unnecessary, almost an embarrassment, it seems.

So if, in the main part, he’s right, then there are two questions: why does “our” specific conception of probability come about only in seventeenth-century Europe when, on the one hand, medicine is ancient and, on the other, gambling is equally ancient? Answer to the first question: Because a fundamentally different kind of medicine was being practiced that had not been practiced before, one not in the Aristotelian or Galenic traditions. But even if that’s true—especially if that’s true—we need to look at the way the hermetic doctors were actually employing the concept of the “sign,” and this means their conception of the diseases they were combating (in the preface to the second edition of his book, Hacking himself admitted, in general, that he needed to have been more historical than he was). The chief disease was epilepsy, which truly did for the first time come to the very forefront of Western medical debate. The cutting-edge doctors understood this disease as a “storm” (or sometimes a “quake” [Temkin 174], Poseidon the god of the sea classically being responsible for “quakes”—a storm which was also a “quake”).

If you think of it in this way—the body being wracked internally by a storm with its winds, a storm which is also a “quake,” then it’s very natural, it seems to me, to think of the epileptic fit as a kind of shipwreck. And so what we need to do, in my opinion, is at the very least think through the epileptic debates more thoroughly and historically, while at the same time, more speculatively, we might consider represen-

tations of shipwreck, for instance, that technically fall outside the medical debate proper, but which may be recalling it or in dialogue with it in another way, in a way that they haven’t before. It’s not that any artistic representation of a vessel wracked by storm somehow says something about epilepsy, but rather that now for the first time there’s probable reason to think so.

Hacking’s second question: why does “our” specific conception of probability come about only in seventeenth-century Europe when gambling is most ancient? Hacking’s answer is simply that gambling and probability aren’t as related as one might think. But here’s an alternative to Hacking’s reasoning. We can use what he did in the medical context as a model: we might look for developments within the history of gambling that occur only and significantly in early to mid-seventeenth century Europe. And we find one readily enough: the opening of the *Ridotto*, the state-sanctioned gambling house, and the invention of “legitimate,” mercantile gambling. As I’ve said, this was unprecedented, idiosyncratic, and inaugurated an explosion of gambling fever across the Continent and in England; I believe that we need to consider the new kind of gambling only now being practiced. Specifically, this means thinking through the—for lack of a better word—“de-personalization” of the gambling encounter and the ways in which the State was now profiting from it, the self-interest it now had in the miserable gamester.

VI. Implied Odds and Ends

Is the early modern rhetoric of mariner and gamester still alive? It is, at least, in contemporary talk about the emergence of probability (although one wonders about the degree of self-consciousness). Consider, in closing, another interesting, popular work on financial history, Niall Ferguson’s *The Ascent of Money*. “The history of risk management,” he says, “is one long struggle between our vain desire to be financially secure—as secure as, say, a Scottish widow—and the hard reality that there really is no such thing as ‘the future,’ singular” (Ferguson 178). The moral of the story is that “there are only multiple, unforeseeable futures, which will never lose their capacity to take us by surprise” (Ferguson 178). Immediately following these remarks, Ferguson meditates on our own recent storm, Hurricane Katrina, before segueing into a discussion of insurance and its origin

in “Bottomry,” the insurance of merchant ships’ “bot-toms” or hulls (186). This insurance was little more than a wager, he says with a bit of a snort: “In truth, all these forms of insurance—including even the most sophisticated shipping insurance, were a form of gambling” (Ferguson 188). The point here is to contrast these uninformed practices with the emerging understanding of probability, which supposedly would provide “an adequate theoretical basis for evaluating the risks that were being covered” (Ferguson 188). But the truth, as Ferguson well knows, is that Sir Ernest Cassell, the gambler, was and is right: “Now I am called a banker,” Cassell said, “but I have been doing the same thing all along.”

If Ferguson has referred to our modern world as “Planet Finance” (5), a world on the verge of wreck, we could just as easily call it the “gaming planet,” a more bullish phrase. And so I’ll hazard a guess: we will understand the thing called modernity only by investing in its philosophy and history and by gambling on its rhetoric, which is both less than philosophy or history and perhaps more. It means taking “light” authors like Cotton, de la Vega, and Chancellor as seriously as “legitimate” authors like Spinoza, Shakespeare, and Hacking. It means getting serious about play at the *Ridotto* and disillusioned about early modern medicine. It means learning the lessons of the speculator and storm.

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