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Innumerate Equivalencies: Making Change with Alternative Currencies

When all is said and done, the quality of uncanniness can only come from the fact of the “double” being a creation dating back to a very early mental stage, long since surmounted—a stage, incidentally, at which it wore a more friendly aspect. The “double” has become a thing of terror, just as, after the collapse of their religion, the gods turned into demons.

—Sigmund Freud, 1919

EVERYWHERE THERE ARE indications that money, once supposedly welded to its value as a natural characteristic of its very substance, is increasingly abstract, detached from any grounding materiality, operating in the realm of pure sign. From reflection on the democratic possibilities of the revelation that money is “only” information (Hart 2001) to appreciation of the logics of circulation warranting the abstractions of contemporary finance (Lee and LiPuma 2002), analysts of contemporary monetary formations wonder what happens to the age old question of how a material object can ever be adequate to abstract value when the object itself literally no longer seems to matter. The story of money is repeatedly told in venues scholarly and popular as an evolutionary tale of greater and greater distance from actual things, of greater dematerialization, in a linear trajectory from barter to metal coin, to paper backed by metal, to paper declared valuable by fiat, and finally, perhaps, to complex financial entities like derivatives, with future, not anterior, backing. The study of the social implications of these monetary transitions has a long and esteemed lineage indeed, from Aristotle to Simmel and twentieth-century anthropology and sociology.

More broadly, however, because of its implication in the problem of the relationship between a material reality and an abstract representation, money in the Western philosophical tradition has often served as the *sine qua non* of the problem of the possibility of truth itself. Barter, the story goes, was direct, unmediated exchange of a quantity of one kind of thing for quantities of another. People bartering did not have to reason any more abstractly than the figuring of ratios (how many apples will get you a fish?). Once money appeared, and mediation by a third term entered the exchange

operation, a new kind of abstraction had taken place. Traders (and analysts) got caught up in the curious dynamics of monetary equivalence, and the conundrum of money's very existence: how can everything be placed on one scale of value figured in terms of money, and how can this thing called money take on such mediating powers?

Anthropologists have long recognized that the "introduction" of money is never so simple an affair, of course. Paul Bohannan's (1959) classic studies showed that other schemes of reckoning abstract value existed in Tiv society before the impact of "general purpose" money came on the scene. More recent writers, like those in an exemplary collection (Akin and Robbins 1999), document the complexity of the interactions between general and special purpose moneys. Others, in sociology, demonstrate that general purpose money, deemed to dissolve all things into the flat wash of monetary value, has never been as straightforward as it has seemed, and that people rarely actually commensurate all things with money, or all moneys with things (Zelizer 1997).

Even though it is so trite and so old, the story of increasing abstraction always seems to cause flashes of revelation when new kinds of actual exchange make explicit the disconnection between money and whatever substance or power is deemed to underwrite it. The debate over the introduction of the greenback in the nineteenth-century United States resonates with contemporary conversations about derivatives, as it does with Melanesian discussions about Western-style moneys' interface with other items. We continually seem surprised by money's disconnect, or its failure "really" to capture worth. In his rich discussion of Melanesian currencies, Robert Foster concludes that Melanesians receive new national moneys in a manner that "exceeds the limits" of representation and abstraction, for "money can never represent or stand for anything else 'truly,' that is, fully and finally. . . . [T]he issue is no longer one of representation's arbitrariness, but rather its ultimate failure. In other words, money is always representationally flawed" (1999:230–31).

Attending to the representational failure of money occasions a reconsideration of the barter story, as well. Marilyn Strathern has argued that assessments of barter as relatively unmediated hinge on a misrecognition of the mathematics and pragmatics of such exchanges. She finds that value here hinges not on the commensuration of differences between things, but rather "a substitution of units" (1992b:185). These units are conceived "as body parts, from bodies (persons) which . . . must first be construed as partible" and also, therefore, as encompassing other things as well (p. 185). This process does not conjure objects separate from subjects, but partible persons/things and abstractable units that are substituted—not compared—with one another. This is not reification of the bourgeois kind. There, by contrast, comparison introduces numerical ratios between dif-

It doesn't build a bigger community, because it's just between the two of us. Now, maybe you say to a friend, hey, you can swap with her for this . . . but [then], if we have cliques swapping, and we have a dozen [people], then nothing happens. So, I guess I've broadened my concept of barter . . . to see how one could barter and trade with more than the person that you started with.

How would you compare [the] sort of barter relationships that you see now, that are direct, with something like the HOURS program?

They're nothing alike.

They're nothing alike? Tell me why.

Emmm . . . because one, one . . . Emmm . . . They're not alike, sort of, of, economically.¹

ferent goods to commensurate value, and poses the problem of the adequacy of a representation (value) to its objects—the very problem that preoccupies the theory and practice of money. Substitution, by contrast, creates analogies, and equivalence in the exchange of gifts “will always (can only) appear as a matching of units” made to become analogues of one another (p. 171).

What if the abstraction of monetary mediation were really a form of substitution? What if the pragmatics of money—not what it does, but *how* it does—obviate that substitution because those pragmatics always seem to involve commensuration and calculation and, thus, comparison rather than substitution?² The adequation of substance to value might then be seen as an indigenous analytical procedure that takes the attention away from analogy and makes money appear to be a matter of abstraction and mediation instead, much in the manner that Sohn-Rethel thought it was, as discussed in the previous chapter. Loosening the grip of adequation may also help to turn around the implicit assessments of abstraction in many discussions of money. Is there a sense in which grain futures, for example, are irreducibly material, and grain highly abstract? Can we imagine a world where the problem of abstraction and adequation obviates the practical effectivity of money, despite, or because of, money's representational failures? Whither, then, social inquiry, a practice that defines itself in relation to the adequacy of its representations to a reality that supposedly precedes it? In other words, does acknowledging money's representational failure point up that of social inquiry, our intellectual currency, itself?

My central contention in this chapter is that accepting money to pose a problem of abstraction and adequation presumes a starting point from a state of fallen grace, a world where matter and spirit are sundered, and only the divine can make the Word flesh. And yet, it is unclear whether we have ever left that state of grace, or whether, instead, continuing in the now of the assumption that we have done so permits other work to take place.

MONEY'S EQUIVALENCES

In most standard descriptions, modern money depends on its function as the general equivalent—the yardstick according to which all value can be measured, the solution into which all goods and services can be dissolved.³ Scholars of money take various positions on the ramifications of that function. Does money's ability to render the qualitative into the quantitative flatten social relations, working like an "acid" on all humane values (Simmel [1907] 1990; see Bloch and Parry 1989:6)? Does money "homogenize" and produce a "featureless" world of "universal exchangeability" (Fine and Lapavistas 2000:367)? Does it "disembed" social relations from their place and time, leading the advance toward modernity (Giddens 1990)? Does money's universal reach demand that there ought to be limits to the placing of all goods and services on one scale of value (Radin 1993)? These questions assume that quantification necessarily involves standardization, homogenization, and universal commodification.

Those who are critical of the "money as acid" hypothesis draw attention to the myriad kinds and multiple effects of money. Money, they argue, does not simply or merely or universally flatten relations and meanings; it can enrich them, multiply them, complexify them (Akin and Robbins 1999; Bloch and Parry 1989; Carruthers and Espeland 1998; Zelizer 1997). Money may be earmarked for specific purposes; it may be separated out into distinct bundles between which convertibility becomes problematic if not impossible (Zelizer 1997). Nonetheless, these critics assume, monetization goes hand in hand with calculation (p. 12). Although money "commensurates incommensurabilities" (Carruthers and Espeland 1998:1400), the quantitative function of money "downplays, or even ignores those aspects of value that cannot be reduced to a single number" (p. 1401). In this line of inquiry, money's role in *commodification* comes under scrutiny. The distinction between the gift and the commodity is revealed to soften with use, and, more importantly, to be a distinction borne of the West's ideologies about itself (Bloch and Parry 1989). Arjun Appadurai has suggested, along these lines, that transcending the "us and them" oppositions implicit in arguments over money and commodification on the one hand and the gift on the other entails critical work to "restore the cultural dimension to societies that are too often represented simply as economies writ large, and to restore the calculative dimension to societies that are too often simply portrayed as solidarity writ small" (1986:12).

In these accounts, that "calculative dimension," equivalence as a mathematical operation, presents itself as common sense, much as it does in Mary Poovey's critique of market values, discussed in the previous chapter. The

mathematical operation is accepted as doing what it claims for itself (as it were): that it calculates, equates, desacralizes, and rationalizes.⁴ But is the conversion to number simply a reduction, a transformation to a lower-order level that permits a generalized abstraction of value across otherwise incommensurable domains? Highlighting the “social differentiation” (Zelizer 2000:385) of money sidesteps the problem: it does not address the question of whether the mathematical operation of equivalence actually rationalizes, but is an “additive” critique: money may rationalize and desacralize, but it also does different kinds of social and meaningful work. Since all analysts of money seem to agree that monetization goes hand in hand with calculation, we need to examine more than the “social networks” and “discursive regimes” in which money moves (Leyshon and Thrift 1997:38). We also need to attend to its mathematics: not whether and how the mathematics are used, not the meanings attached to it, not its metaphorical functions—but the mathematical form of the equivalence function itself. I will argue that this is a moral form.

Equivalence is not a straightforward or self-evident affair; it rotates around a specific numerological metaphysics that hinges on the figure zero and the algebraic function. Equivalence is also haunted by the possibility of its own failure, the lack of certainty at its core embodied by the figure zero in the algebraic equation necessary for any monetary conversion. Equivalence is haunted as well as by the uncanny doubling its potential failure facilitates, its rendering of difference into similitude, but not quite (Bhabha 1994; Schwartz 1996). It is this “not quite,” this troubling remainder, that animated Renaissance European double-entry bookkeeping, and wizarded from accountants’ books the mysteries of “income” and “profit,” the sublime objects of capitalist ideology (Poovey 1998). To make this case, this chapter presents contemporary alternative numerologies of money and finance. I am interested in how, in their moments of apparent analytical, but not pragmatic, failure, these alternatives call into question the general equivalent and its attendant mathematics, and make explicit the messy but necessary remainders of those capital equations.

In the sections that follow, I explore specific mathematical practices among adherents to alternative monetary forms—the elimination of interest and interest-bearing debt in a mutual fund market framework and the making of change in a farmers’ market transaction. The chapter considers whether and how these contemporary alternatives, in their moments of apparent breakdown, concoct new monetary, mathematical, and meaningful forms, and reveal something hidden in the old. I am interested in the morally fraught equivalencies that occur when Islamic conceptions of *riba* are translated into *zakat*, and when alternative currencies are translated into U.S. dollars. According to the explicit ideologies articulated around these monetary forms, such translations should not be possible. Yet, in fact,

they continually recur. They also, I will suggest, work in concert with critical analyses of capitalism, in an ideological fantasy constituting possibilities of social change in frameworks of monetary transformation.

PURIFYING ISLAMIC MUTUAL FUNDS

In 1999, Dow Jones inaugurated the Dow Jones Islamic Market Index (DJIM). One of its family of stock market indices, the purpose of which is to aid investors and especially mutual fund portfolio managers in the selection of stocks, the Islamic Market Index was intended to provide “a definitive standard for measuring stock market performance for Islamic investors on a global basis” (Dow Jones 1999:3). Like other Dow Jones indices, it is updated and disseminated every fifteen seconds.

As is the case for most Islamic financial institutions, the DJIM submits to periodic review of a Shari’a Supervisory Board (SSB). Generally speaking, SSBs are made up of scholars, jurists, and clerics from a variety of countries representing the world community of Muslims. While members of SSBs adhere to one of the four main branches of Islamic jurisprudence, in practice they are bricoleurs, drawing from any jurisprudential source they deem appropriate for a particular problem. The several international clearinghouses for Islamic financial services information—from the Institute for Islamic Banking and Insurance in London, to the Harvard Islamic Finance Information Program, to the Islamic Finance Net Internet Listserv—routinely field questions from Islamic banking professionals seeking a particular legal school’s opinion on a particular issue.⁵

The index proceeds from two assumptions about the relationship between Islam and the global market. The first is the assumption that something called a “global Islamic market” always-already exists. The index is simply a method of “measuring” it at any given moment. Measuring that market entails first determining which business activities make it up. To do so, Dow Jones devised “filters” or “screens” that would catch the elements of the already-existing global market that are “Islamic,” and sift out those that are not. The second assumption follows closely on the first: any business activity *permissible* according to Islamic norms—themselves subject of considerable controversy—is itself *Islamic*. In other words, if I were to open up a widget company and sell shares of it on the stock market, my widget company would be deemed Islamic even if none of its activities had anything to do with any actually existing Muslims or any Islamic religious or financial principles. So long as I did not intentionally or unintentionally violate those principles, my company would be deemed to be (actively) following those principles.⁶ The idea that the passive nonviolation of Islamic principles implies active acceptance of them is in line with the Islamic

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modernists who, at the beginning of the twentieth century, argued that any activity that proceeds according to “universal rules” (from the motions of the planets to the decisions of an entrepreneur) adheres, on the basis of that universality, to the principles of the divinity. Such thinking allows contemporary modernists to claim that Islam permits the purest expression of the market form; and that, if Islam signifies justice, then the purest market signifies justice, as well (just as Posner thought it did).

At the same time, the operations of the Index proceed as if this global Islamic market is in a constant state of fraught conjurings. Dow guidelines provide two main screens to filter stocks deemed Islamically pure from the total universe of stocks. The first eliminates businesses whose activities violate Islamic law: those that deal with alcohol, tobacco, pork products, financial services, defense and weapons, and entertainment. The final element of this list is significant because it represents a path of least resistance: rather than assessing which hotels serve alcohol or pork, for example, or which motion picture production studios are involved in anything approaching the pornographic (which is considered prohibited in Islam), Dow Jones decided to eliminate all of them from the investable field. For the same reason, some Islamic mutual fund portfolio managers exclude all companies involved in any kind of meat production because, as one put it, “You never really know what goes on in those places.” The global Islamic market, then, while assumed by the DJIM to be always-already there in the world, ready to be measured, is not quite as clearly bounded or absolute as it may appear. It is always at risk from unholy dangers, as well as mundane inaccuracies (for example, some meat or entertainment businesses may be operating in perfect accordance with Islamic norms but end up screened out of the global Islamic market by the operations of the DJIM).

The second screen deals not with what kind of business a company does, but the manner in which it operates. It consists of three separate “financial ratio filters” that sift out “companies with unacceptable levels of debts or impure interest income.” The first excludes companies whose debt to assets ratio is greater than or equal to 33 percent. The second excludes companies whose accounts receivables to total assets ratio is greater than or equal to 45 percent. The third excludes companies whose interest income to revenue ratio is greater than or equal to 5 percent. In May 2001, the DJIM issued a revision of these financial ratio filters, such that corporate debt can constitute up to 33 percent of its market capitalization instead of 33 percent of assets, and interest is limited to less than one-third of market capitalization, instead of 5 percent of income. The revision has sparked discussion and controversy among members of several Islamic banking Internet discussion groups, who worry that the DJIM, in the interests of expanding the investable universe of stocks, has become more “liberal.” The DJIM may re-

vises these filters further in light of these concerns, and many Islamic financial advisers currently, when in doubt, use the old guidelines.

These financial ratio filters seek to guard the Islamic market against *riba*, often glossed as interest. As already discussed, the prohibition against *riba* is hotly debated. Islamic economics, both as an academic discipline and a field of professional expertise, hinges on the prohibition. In the calling forth of a global Islamic market, however, the Dow Jones Islamic Market Index—one of the movement's greatest and most visible successes—appears to turn that absolute into a calculus, a limiting function that does not screen out *riba* entirely, but rather keeps it within specified parameters.

The transformation of *riba* into a limit function permits another. Although financial derivatives like futures and options are held by many in Islamic finance to be a form of gambling, the technical and especially mathematical apparatus warranting them can become a tool for “purification.”⁷ Islamic financial engineers can use derivative pricing procedures like the Black-Scholes formula to “purify” a portfolio. An Islamic mutual fund manager can use such a formula to estimate how much of a stock's return derives from that fraction of a company's income that is derived from interest. The manager can then determine how much of the total portfolio's return derives (theoretically, at least) from interest. That amount can be “purified” by being given to charity. Now, the status of that charity is up for debate. When I first heard presentations about the DJIM Index at conferences in the late 1990s, many equated that charity with *zakat*, obligatory alms. By 2001, however, many were saying that it could not be *zakat* because the amount given in charity could never be predicted in advance and meet the requirements of “true” *zakat* (generally defined as 2.5 percent of one's income and assets per year).⁸ At issue is the question of when charity becomes *zakat* or when it is more properly *sadaqa*, the voluntary contributions discussed in the last chapter that have an etymological relation to truth and to friendship. To some, however, these gifts to charity are not properly speaking “voluntary,” since not making them means withholding forbidden *riba* or tainted income.

Alongside the debate over charity runs another. The use of mathematical theory (e.g., Elgari 2000) points up Islamic financial engineers' understanding of mathematics in moral terms. The Black-Scholes formula, for example, is a probability function designed to deal with a stochastic or random process. As such, it is a product of what economic historian Philip Mirowski (1989) has termed the “probabilistic counter-revolution” in neoclassical economic theory. Mirowski has traced the rise of probability theory in economics to a repudiation of strictly determinist models and an elaboration of statistical procedures designed to deal with real-world numbers and to “eventually achieve numerical results.” But, for the Islamic portfolio manag-

ers, those numerical results are moral results, even if—or because—the results are subject to “differences of opinion” (Elgari 2000:77).

Islamic financial engineers can also mathematically scale the *riba* calculus by attempting to approach the limit of the limit. In the words of one portfolio manager, “even though the Shari’a Board allows up to 33 percent debt and 5 percent interest, we try to keep it well below that, like, to 18 percent and 2 or 3 percent, because otherwise it’s just wasted—we have to give it up in charity.” In the “pure market” of the Islamic index, in other words, investors still demand returns and do not want to see their investments “wasted” on charity, regardless of any religious mandate. It is a mistake to view this as a contradiction between theory and practice. What is at stake is a matter of both a remaking of Islam through the bringing together of *riba* and charity, and the remaking of the market as moral even in the pursuit of individual profit without regard for others. For, in the Islamic banking formulation, Islam and the market are/ought to be “equivalent.”

The mathematical operation of equivalence between *riba* and charity also reveals people’s efforts to resist it in the name of economic profit (“we don’t want to waste it in charity”). Even that resistance, however, by serving the laws of “the market,” presumed to operate according to the dictates of individual profit-seeking, serves the modernist conception of Islam at the center of Islamic economics. The mathematics of Islamic financial engineering points toward the divine and the market, both of which are taken to index the greater good of social justice. Social justice is symbolized and made material, then, both in the giving of charity, whether as *zakat* or *sadaqa*, and in the effort to avoid doing so. The numbers that allow these moral mathematical calculations point toward “facts” that, far from being deracinated particulars, are always-already evidentiary. The equivalence function is never complete; there is always a moral remainder, as it were. That remainder is the uncanny presence of an abstraction of transcendental value—the value of God and the values of the market.

MAKING CHANGE IN LOCAL CURRENCIES

A young woman who had decided to leave the suburbs, college, and the predictable path of so many of her peers in exchange for the life of an organic cooperative farmer stood in the summer sun one Tuesday morning, explaining to me her use of a local, alternative scrip currency in lieu of the U.S. dollar. “A lot of people [here] don’t support the government completely. . . . I definitely like to see the fact that we can keep a local currency, and I think it builds community more, and people get involved with the community as well.”

At the same time, she articulated a particular anxiety that repeatedly surfaced in people's everyday use of the local currency. While speaking of the produce she sells in the farmers' market, she lingered over the very practical problem of "making change," both in the sense of returning to a customer the remainder of a market transaction, and in the sense of contributing to the building of a new society: After showing me that she sells bunches of carrots for a dollar each, she continued:

most of our stuff is done in even prices, so, like an eighth of an HOUR is a dollar twenty-five, so, [if you purchase a bunch of carrots with a 1/8 HOUR note,] you get the twenty-five cents back. And that's one thing, that [is] kind of strange about it, . . . you know. . . . Um, just, because we're trying to avoid the currency as much as possible, and to exchange back and forth like that with it . . . kind of breaks the whole system in a way.

Her use of HOURS, she believed, was a small part of a shift away from American materialism and corporate domination and toward "community values" and "community solidarity." And yet, at the same time, she remarked, of American society more generally, "I really don't see it changing all that much."

Time and again I encountered people who, in the course of dealing in HOURS, had to make equivalence conversions that never seemed to sit well with them.⁹ Some tried to settle their anxiety about making change in the farmers' market by simply trying to keep their dollars separate from their HOURS and maintaining this monetary boundary as strongly as possible. Sometimes, this could mean losing a sale. Mostly, however, this would mean simply turning down a customer's HOURS and accepting only dollars—even, and especially, when a market vendor is what people call a "diehard" HOURS supporter. The diehards' efforts to maintain a clear separation and to deny convertibility between HOURS and dollars more often than not results in their accepting more U.S. dollars than they would otherwise, if, for example, they would simply break change for an eighth-HOUR note and return to a customer the twenty-five cents owed on a purchase of a one-dollar bunch of carrots. People who made an effort to keep their HOURS and dollars separate often kept their U.S. currency in a lockbox, and their HOURS in an envelope. One diehard who used this method told me she started doing it because some customers would come to "buy the smallest thing they could and try to get cash back." This same farmer, the next day, was unable to break my quarter-HOUR note when I attempted to purchase some beans, and so insisted I pay in U.S. currency. "Wouldn't you know it. . . . I think the HOURS are in the other truck. Well," she joked, "there you have it. You try to use HOURS . . ." You try to use HOURS, and then you can't.

Fractional HOURS notes make the problem of the commensuration of HOURS with dollars more explicit, and more explicitly foreground the problem of the labor theory of value subtending the currency. Until 2003, the smallest HOURS note, the 1/8 HOUR, already pointed toward the pull of the dollar over that of labor time because while 1/4 HOUR can convert into a useful \$2.50, an eighth of an hour of labor time is only 7.5 minutes—not a particularly “useful” amount of time within which to conduct a service. In 2003, the new board of directors began issuing 1/10 HOUR notes. Again, this is very convenient from the point of view of a dollar exchange—1/10 HOUR equals one dollar—but again makes explicit the HOUR’s failure, after a fashion, as a currency tied to labor for its labor time equivalent is only 6 minutes.

At the same time, however, among vendors and farmers, HOURS seem usefully and tangibly to supplement U.S. dollars. HOURS and dollars mix freely in the repayment of debts and the settling of accounts between vendors and farmers, especially between farmers on the one hand and crafts vendors on the other. They are used together and interchangeably—often, as part of the same payment—for transactions that take place within the farmers’ market on a regular basis. One pottery maker, having given a farmer a basket in which to display her produce two weeks before, received from her a mixture of dollars and HOURS. He then took the HOURS and went about purchasing vegetables for the week. People usually settle debts like this on a weekly or biweekly basis, and they are central to the continuing circulation of HOURS in this community.

Other important sites for the circulation of HOURS are the several large businesses that accept them and that offer to pay their employees partially in them. “For tax reasons,” as one manager explained, HOURS and dollars at her establishment are not kept separate. “They’re a lot like food stamps, the way we handle them,” another manager explained. In people’s everyday speech, HOURS’ conversion into dollars is so complete that they are denominated almost automatically in dollar amounts. When I asked a store accountant “How many HOURS does each cashier keep in the drawer?” she responded instantly, “twenty-five.” Twenty-five HOURS would be equivalent to \$250, so, I asked for clarification. “Two hundred and fifty dollars, then?” She responded, “No, no. Twenty-five dollars,” or, in other words, two and a half HOURS. Similarly, when I asked in another context how many HOURS a store took in during any given day, a clerk responded, “thirty-seven.” Again, upon asking for clarification, I learned that this referred to \$37, not \$370.

But when people convert HOURS into dollars like this, what do they mean by “dollars”? The vault manager at one of the local credit unions that accepts HOURS showed me a page from her ledger book one afternoon. At the end of the working day, she records the *number* of pennies, nickles,

dimes, quarters, one-dollar bills, five-dollar bills, ten-dollar bills, twenty-dollar bills, fifty-dollar bills, one-hundred-dollar bills, and HOURS that the credit union vault will hold that night. While there is a separate ledger column for each denomination of U.S. currency, there is only one for HOURS. In other words, there are not separate boxes in which to enter the number of eighth-HOUR notes, quarter-HOUR notes, half-HOUR notes, one-HOUR notes, and two-HOUR notes. I asked her to explain this, since, it seemed to me, the credit union would want an accurate tally of its holdings in HOURS each night. She told me that she is not required to enumerate HOUR notes in the same way she does dollars and cents. Instead, she converts HOURS into a dollar equivalent, using the ten-dollar-per-HOUR rate, and records their “value.” As she explained this to me, her voice trailed off: “You know, it’s so unreal. When you see all the money in there, and have to record it on a piece of paper like this, it’s just so unreal.”

Here is a clue, I believe, to the referent of “dollar” in people’s near-automatic rendering of HOURS into dollars. It is not the dollar as a piece of paper, or the dollar signified by tally marks in a ledger book, or the enumerative presence of tangible objects held in a vault. Rather, the dollar indexed in statements like “We keep twenty-five HOURS in the drawer, I mean, twenty-five dollars of HOURS,” is the dollar as abstract numeraire of value. In the ledger book, HOURS have presence as value, not as enumerated objects. That value is measured in terms of “abstract” dollars, not physical paper dollars. The disbelief of the vault manager—“it’s just so unreal!”—is quite instructive: we know the dollars in the vault are just pieces of paper. Indeed, in the books, they signify *only* as pieces of paper, as objects in the world, one-nesses in the sense described by Sohn-Rethel and discussed in the previous chapter, pure things in themselves that are not beholden to any theory, person, or social relation for their presence but are just there. In contrast, HOURS are animated by the dollar as numeraire, as the abstraction of value.¹⁰ Even in the paper dollar’s negation as value in the ledger book of the bank accountant who is simply interested in counting objects qua objects, or in the cash boxes and envelopes of the diehard organic farmers seeking to stand outside of the dollar economy, the “abstract” dollar asserts itself, again and again. The remainder left over after the (attempted) transaction in HOURS, “making change” in both the monetary and social senses, is the uncanny presence of an abstraction of transcendental value—the value of the dollar and the values of the market.

EQUIVALENCE AND THE MOUSETRAP

What is at stake in the apparent revelation of transcendental value in these two monetary alternatives to contemporary financial globalization? In both

instances, analysis reveals hidden terms, just beneath the surface. Diagnosis: fetishism! Actually, double fetishism. What analysis reveals is not the “real” truth of the matter, but another fetishistic spirit: Islamic banking and Ithaca HOURS are both haunted by transcendental value, which is simultaneously their greatest failing as true “alternatives” and their greatest mystery, the spirit that keeps them functioning. And what is this transcendental value but a fundamental misrecognition, a covering over of the really real relations of production that are structuring market transactions and, in the case of the local currency, literally “backing” value—labor power. This, however, is too simple an analysis. As James Ferguson cogently remarks, “The danger in thinking is not so much fetishism as it is the illusion that one has escaped it” (1988:490).

Equivalence, a reduction into sameness, is obviously part of the fantasy work of fetishism. For Marx and Freud, money, in rendering dissimilars into species of the same, participated in the uncanny. Marx referred back to Shakespeare:

Shakespeare brings out two particular properties of money. 1. It is the visible god-head, the transformation of all human and natural qualities into their opposites, the general confusion and inversion of things; it makes impossibilities fraternize. 2. It is the universal whore, the universal pander between men and peoples. The inversion and confusion of all human and natural qualities, the fraternization of impossibilities, this divine power of money lies in its being the externalized and self-externalizing species-being of man. It is the externalized capacities of humanity. What I cannot do as a man, thus what my individual faculties cannot do, this I can do through money. Thus money turns each of these faculties into something that it is not, i.e., into its opposite. (Marx [1844] 1997:110)

For Marx, the transformation of things into their opposites spoke of the monstrous reduction of human relationships into relations among things, by way of the dismembering of the person into bourgeois self and alienated labor. “By turning his money into commodities that serve as the material elements of a new product, and as factors in the labour process, by incorporating living labour with their dead substance, the capitalist at the same time converts value, i.e., past, materialized, and dead labour, into capital, into value big with value, a live monster that is fruitful and multiplies” ([1865–66] 1997: 468).¹¹

It seems we cannot escape monsters. At the same time, however, merely “revealing” what was previously hidden perpetrates three errors. First, it assumes that the hidden actually is or was obscured. In fact, in the Islamic banking and local currency examples, that which I could have identified as the latent content of the monetary equivalence, was, upon occasion at least, clearly articulated in the practices if not the consciousness of participants

themselves. I did not reveal a hidden term—God/dollars—so much as re-fract it through their own discursive practices. Second, it assumes that the analyst has some special access denied participants—a classic anthropological and critical hubris. Participants in these alternative monetary forms know quite well that God and the dollar lurk just behind the surface, and even, sometimes at least, know quite well that something else lies behind even these terms—the social for Islamic banking, inflected through the term *justice*, and labor power for the local currency, indexed most directly in the very name of the money (“hours”). Third, and most important, it does little to answer the question of why *equivalence-functions* and not some other operation conjure the spirit of transcendental value in order to hide the real spirit of value—labor—and replace it with the sublime. Why, as Žižek puts it, should the content assume such a form (1995:300), the form of the algebraic equation?

Diane Nelson provocatively indicates, “Playing detective and getting down to how the fetish ‘really’ works completely misses the magic act” (1999:77). The magic act here involves the three errors just articulated. Attending to the magic act means breaking with the tradition of algebraic reason—“solve for *x*”—that has characterized social analysis and that rests on the stability of the distinction between fact and evidence (as well as ontology and morality, profane and sacred, etc.). There is a “more” that fascinates in revealing the secrets of the commodity-form and the equivalence-function. This “more” drives the critical impulse, both my critical impulse and that of the people whose monetary alternatives I have discussed. We are both, after all, members of “reflexive” communities that “consciously pose [ourselves] the problem of [our] own creation” (O’Doherty et al. 1999:1646, quoting Lash 1994). This “more,” I am suggesting, following Žižek (1994), is the fantasy-work of the form itself. The question better posed, then, is not what is at stake in revealing the latent content of the fetish, but what is *on stage*, both when analysts, through critique, and analysts, through monetary alternatives, attempt to do so?

Consider Islamic portfolio management and local currency transactions as a drama within the drama of global capitalism, or a play-within-a-play. In Alenka Zupančič’s excursion into Hitchcock films, the play-within-a-play represents a “moment where fiction is faced with its own exterior at its own interior” (1992:82). In the play-within-a-play, that which is excluded from the fiction in order for it to function as narrative, all the background assumptions, technologies, and prediscursive elements that are the conditions of possibility of narrativity, are condensed into the moment of the fictionality *within* the fiction. For example, to stick with the filmic analogy, if the microphone boom or gaffer were visible to viewers of the film, the magic of the movie would evaporate. However, the filmmaker *can* represent those technologies and background elements through a process of

doubling or duplication inside a fictional scene set within the film, in a drama that the filmic characters view, for example. In Hitchcock (e.g., *Murder*, or *The Thirty-Nine Steps*) this moment of fiction-within-fiction is right at the center of the larger narrative, and it constitutes the space of revelation toward which the narrative flows. The doubling effected by the play-within-the-film reveals the “sign of guilt” of the murderer, as well as the signs of guilt of the originary fictional act. The effect is that of a setup (for the murderer as well as the viewing audience), a “mousetrap.”¹²

The mousetrap device stands in contrast to the “whodunit.” In a whodunit, we “coldly and without emotion await the end to learn who committed the murder. The whole interest is concentrated in the ending” (Župančič 1992:83). The detective in the whodunit plays the role of the scientist/analyst: he or she gathers clues and reconstructs the crime, and thereby deduces the identity of the murderer. But “if the climax of the whodunit is the moment when the murderer’s identity is revealed,” the mousetrap setup is quite different (p. 83). “The fascinating point is not the revelation of the murderer’s identity, the reconstruction of the crime and the deduction of the truth, but *the manner in which the truth is displayed*—or is gazing at us, if we can put it that way, in the glint of the murderer’s eye” (p. 84, my emphases).

Islamic banking and local currencies, as plays-within-a-play, are like Hitchcockian mousetraps. It is not the revelation of truth—“I have gathered all the clues and now can point the finger: the capitalist is the murderer! He has turned dead human labor into living nonhuman objects!” Rather, it is the particular staging of truth: in making change, or failing to do so, and in giving *zakat*, or seeking to avoid it, the actors in the play-within-the-play reveal the transcendental in the failures of equivalence, materialized in their social activity. That transcendental is uncanny precisely because it is so deeply familiar to social practice. As Žižek puts it, “the fundamental level of ideology . . . is not of an illusion masking the real state of things, but that of an (unconscious) fantasy structuring our social reality itself” (Žižek 1995:316). Or, in other words, the illusion “consists in overlooking the illusion which is structuring our real, effective [and affective]¹³ relationship to reality” (p. 316).¹⁴

The ideology-work, in short, is the act of critical analysis of the real, the attempt to be “nonduped” by ideology, whether in “my” social science fictions¹⁵ or “their” alternative market forms. Because of our complicity in each other’s critical projects, we perpetuate the illusion that we are beyond or above the illusion. Or, in other words, we perpetuate the facticity of the facts of both social science and monetary transactions: in a word, the enumerable, that which is capable of entering into the algebra of equivalence in the first place. This holds even for the human sciences, and not just the quantitative ones. In claiming social occurrence x as an instance of phenom-

enon y , I conjure a relation of equivalence through a function of enumeration; that which is enumerated as an “instance,” before it becomes evidentiary as an “instance of,” is an enumerable deracinated particular, a “fact.” This is the kind of operation that allows us to ask about the effects of equivalence (does it provide instances of homogenization, or instances of social differentiation?) without querying the equivalence function itself. And it leaves us stuck in the same debates we have been having since Simmel.

MONSTERS, MARKETS, AND MODERN FACTS

As Brian Rotman (1987) has argued, Shakespeare’s *King Lear*, written around 1606, is an allegory about new economic formations and new ways of perceiving the world. It is profoundly haunted by the figure zero, the possibility of absolute absence—the “nothing” around which new knowledge practices like double-entry bookkeeping found form. The tragedy begins with Cordelia’s refusal to denominate her love for Lear in monetary terms, as her two sisters had already done in return for a third each of the kingdom:

Lear: . . . what can you say to draw
A third more opulent than your sisters? Speak.

Cordelia: Nothing, my lord.

Lear: Nothing?

Cordelia: Nothing.

Lear: Nothing will come of nothing. (I.1)

The drama continues with Lear’s ensuing madness and culminates in his death, his own rendering into nothing. Because of his infatuation with the numerologies of monetary equivalence, he forsakes his kingdom and eventually his life—his crown a great ‘O’ as well, as indicated by the Fool, who sees “nothing” in that symbol of Lear’s royal station: “Now thou art an O without a figure. I am better than thou art now: I am a fool, thou art nothing” (I.4). The play is full of accounting metaphors, some not picked up by Rotman, beginning with the opening exchange in the play, between Kent and Gloucester (“equalities are so weighed that curiosity in neither can make choice of either’s moiety”).¹⁶ I am particularly fond of the metaphorical reconciling of accounts that occurs in the resolution of the conflicts between the two evil sisters and the two Eds (Edmund and Edgar)—especially the latter, who are alike, but not quite.

Given the importance of the new knowledge practices of accounting in the play, we can also read *King Lear* as part of the history of academic

disciplinarity. The literary historian Mary Poovey (1998) analyzes the separation of the sciences of fact from the force of rhetoric through the development of modern financial accounting. While others have taken Poovey to task for a certain laxity in the mustering of the facts of history (e.g., Jacob 2001), I am interested in how Poovey shows the manner in which Renaissance bookkeeping constituted a modality of argument that couldn't quite escape its status as rhetoric. In part this is because people could fudge the numbers and did so all the time for different rhetorical effects.

Poovey argues further that double-entry did not simply have rhetorical effects, but was itself a specific mode of argument. The balance book pivoted around zero, a number that troubled Renaissance accountants and their interlocutors (Rotman 1987). Double-entry was an algebraic operation, and algebra had entered into Europe via the deeply religious texts of Mohammed ben Musa (also known as al-Khwarizmi, from whom we derive the word algorithm), a figure overlooked by Poovey and Rotman. For al-Khwarizmi, algebra was a prayerful activity, something not lost on the Renaissance European importers of the technique. Enumeration was not a natural act but a metaphysical one. Solving for x did not mean finding the “real” value of a slave, cost of a bride, or exchange rate between wheat and barley (the examples that make up the bulk of al-Khwarizmi’s text). It was, instead, partaking in, following along with, pointing toward the quintessence, the absolute.¹⁷ “The balance,” Poovey remarks, “conjured up both the scales of justice and the symmetry of God’s world” (1998:54).

There were two sides to this divinity, however. Zero, like money, was possessed of unsettling, potentially demonic powers.¹⁸ Indeed, this relationship between zero and money was made explicit in eighteenth-century ballads about the South Sea Company's rise to prominence and spectacular downfall, as in the following little ditty by Thomas D'Urfey titled "The Hubble Bubbles":

A bubble is blown up with air,
In which fine Prospects do Appear,
The Bubble breaks the Prospects lost,
Yet must some bubble pay the cost,
 Hubble bubble bubble hubble all is smoke
 Bubble bubble hubble bubble all is broke
Farewell your Woods your Houses Lands your Pastures
And your Flocks.
For now you have nought but your Selves in ye Stocks.

(in Dugaw 1998:52)

Like the hapless stock jobber in the song, the facts of double-entry depended on their being beholden to “nothing” but themselves, on their being deracinated particulars, stand-alone data that were not wedded to

any theory. They could be enlisted as evidence, but supposedly were not, in themselves, evidentiary. At the same time, however, their pivot point, zero, could not escape its broader and more sinister metaphysical connotations. After all, “now you have nought but your Selves in ye Stocks” implied not just foolishness but heresy, heresy against the divinely ordained hierarchical social and legal order and the forms of property—woods, houses, lands, pastures and flocks—that mirrored and justified it. This heresy, as a religious modality of perceiving the world, belies the easy separation of ontological facts from deontological evidence.

Historians of mathematics trace the origins of the fact/evidence distinction not to algebra but to an apparent bifurcation in concepts of probability (Daston 1988, 1994; Hacking 1977). These scholars seek to historicize the separation between probability taken as a description of random processes in the world and probability taken as an assessment of the weight of arguments (e.g., “it is probable that . . .”). The former probability, based on recording and measurement, is central to the discursive fabrication of the kinds of facts we take for granted when we talk about empirical reality. The latter transmutes into rhetoric, discourse, language games, law. The bifurcation of probability into stochastic probability and argumentative probability lies at the root of the historical separation of scientific from humanistic inquiry. Take Blaise Pascal, a figure central to most historical accounts of probability. His correspondence with Fermat over games of chance is taken as the aleatory, descriptive side of probability theory, while his wager over the existence of God is generally taken as the rhetorical, weight-of-argument side of probability theory. The former relied on number, rendered a purely descriptive function of counting; the latter relied on words and arguments, the persuasive force of rhetoric. (Shades of the sciences/humanities division in the contemporary academy.)

What then are we to make of Pascal’s experiments with magic squares, however (table 4.1; Darriulat 1994)? A magic square consists of rows and columns of numbers arranged so that carrying out the same arithmetic operation across the rows and down the columns results in the same number. Christian, Jewish, and Muslim mystics used magic squares to demonstrate miracles to the heathen in order to convert them, to deduce and manipulate the flows of divine knowledge in the world, and to marvel at the unity of creation (see Karpenko 1993). Number here did not describe countable objects or phenomena in the world; rather, number was a marvel, always-already evidentiary for God’s design.¹⁹

In short, number did not become transparent, in the sense of merely reflective of countable, deracinated particulars in the world, in any simple or direct or complete sense. Indeed, turning to the number zero, the pivot of double-entry, we find that its rhetoricality and mystical properties were never really occluded, just refracted through new knowledge practices and

TABLE 4.1
A Magic Square

1	15	14	4
12	6	7	9
8	10	11	5
13	3	2	16

discursive struggles. The balance did signify the divine, but it was the particular divinity associated with miracles and portents, not the distant divinity who set the clockwork of the universe in motion and then receded from the world's view. Where Poovey sees the balance as sidestepping the association between number and necromancy (1998:54), then, I suggest that a different slice through the sort of divinity people had in mind during their calculations reveals these number games to be far from rationalizing or desacralizing.

Miracles and portents were not just figures of numerology. They were also found in monsters. With the consolidation of Baconian science, monsters became objects of the natural world. In Robert Boyle's formulation, monsters, as aberrations, give insight into the normal order of things, and thus confirm the natural world as one eminently explicable by the laws of science (Daston and Park 1998). While Enlightenment Europeans naturalized monsters, however, they invented at the same time new figures of fancy that had the potential to topple this natural order. Both popular class and elite Western Europeans wizarded up and then tried to cope with the new cultural domains of finance and of fiction, and became avid consumers of stocks and storybooks (see Hentzi 1993; Ingrassia 1995; Sherman 1996). Returning to the South Sea Company and the emergence of modern stock markets, then, there is more to the "nothing" of D'Urfey's "Hubble Bubble" than might at first glance be apparent: "now you have nought but your Selves in ye Stocks." Not only is the present rendered a nothing; not only is property dissipated into lack. The self is, as well. Having "nought but your Selves" is tantamount to Lear reducing his crown to an empty O. In a world where property and title had gone, apparently organically, hand in hand, the troubling lack conveyed in zero, paper stocks, and fictionality—the creation of nothing out of nothing for no (holy) purpose—called forth a new and terrible beast: the person as empty cipher, the subject as its own negation and absence. This was indeed a frightening monster. It recalls Shakespeare's depiction of Goneril and Regan, the evil sisters, as no mere humans but strange and vicious creatures—serpents, kites, and carrion fowl. Zero and algebra thus did not simply close off "the infinite prolifera-

tion of number signs” (or metaphysical signs) it seemed to bring into being (cf. Rotman 1987:32), but opened up the inhuman, the soulless, and the monstrous, through the interlinked practices of spinning fictional tales and making financial speculations.²⁰

The fantastic creations of paper credit also redounded into natural science. As scientists brought monsters into the natural order, they did not always do so with a ready-made explanatory framework. What was important was not the existence of a rational explanation for a miracle or a monster, but, rather, the *possibility* of there being a rational explanation. Lorraine Daston terms this, appropriately, a “promissory naturalism”: “It is the possibility in principle, not the actual availability of a natural explanation, that counted here. . . . This kind of promissory naturalism, based more on metaphysical faith than scientific competence, remained typical of attempts to naturalize marvels and miracles well into the eighteenth century” (1994:251). The promissory naturalism was akin to the promissory notes of the stock-jobbers—a species of faith and credibility in the possibility of realizing abstract truths or absolute value, and not the actualization of truth or value.

I wish to draw attention to this traffic among divine monsters, natural science, mathematics, and finance in the emergence of new forms of equivalence. Doing so does not reveal something previously hidden, some nugget of essential reality or truth. Instead, it simply fleshes out some of the ghosts in the machine of capitalist numerologies. The equivalence function was never a simple desacralizing operation; its mathematical form was never purely ontological. Instead it was always a moral form. This recognition permits me to describe some of the work involved in producing both commonsense and critical “truths” of money.²¹

Lorraine Daston and Katherine Park open their book about monsters with a story told by Robert Boyle that illustrates the promissory naturalization of the uncanny, and the tight relationship between wonder, marvels, and scientific investigation. In a scientific paper published in 1672 about “shining flesh,” Boyle inserted a narrative about the “night before,” and set up a mousetrap of his own, a fact-within-a-fact, so to speak:

Yesterday, when I was about to go to bed, an amanuensis of mine, accustomed to make observations, informed me, that one of the servants of the house, going upon some occasion to the larder, was frightened by something luminous, that she saw . . . where the meat had been hung up before. Whereupon, suspending for a while my going to rest, I presently sent for the meat into my chamber, and caused it to be placed in a corner of a room capable of being made considerably dark, and then I plainly saw, both with wonder and delight, that the joint of meat did, in divers places, shine like rotten wood or stinking fish; which was so uncommon a sight, that I had presently thought of inviting you to be a sharer in the pleasure of it. (quoted in Daston and Park 1998:13)

The “pleasure” of the sight, Daston and Park write, kept Boyle going right through until the next morning; he even called for another shank of veal to be delivered to his room while he was undressing for bed (p. 13). I want to suggest, in the spirit of Daston and Park, that the pleasure here is not simply that of the scientist faced with a new challenge for his emerging explanatory framework. It is also the pleasure and terror of wonder itself—the excitement of an encounter with the uncanny, and the thrill that comes from the manner in which the “truth” is revealed in a mousetrap.

In a world dominated by strikingly uniform globalization slogans that proclaim there are no alternatives to neoliberalism, financial integration, or capital mobility, it is important to insist on the experiential metaphysics of this thrill of wonder, and to recuperate the uncanny within it. This seems especially pressing in light of the scholarship on money and commodification that readily accepts quantification’s desacralizing and homogenizing claims and looks elsewhere, but never at the mathematics, to find hope in other meanings, other social practices, and other institutions in an additive and indirect critique. The veal shank’s unearthly glow could, after sustained scientific investigation, be naturalized—the promissory note could be cashed in for gold. The fact that such promissory notes today cannot be cashed in for gold does not take away from their relationship to the sublime and the uncanny.²² It is important, however, not to lose sight of the fact that the ghostly glow shimmers only on rotting meat, that the other side of the sublime is slime—the messiness of desublimation necessary to create the seemingly pure forms of monetary equivalence and the seemingly pure distinctions between gift and commodity, sacred and profane, that animate whole monetary, mathematical, and market worlds (Giblett 1996; Gibson-Graham 1996; Maurer 2000).

But which is the sublime, and which is the slime, in the alternative financial forms examined in this chapter? For Islamic portfolio managers, any income “tainted” by *riba* must be “purified.” For local-currency diehards, government-issued currency is quite literally “dirty money.” For both, however, their efforts to make change—literally and figuratively—hinge on a transmutation of filth into faith.²³ *Riba*, forbidden interest, becomes charity, a charity that speaks to truth, friendship, social justice, and the divine. U.S. dollars become the abstraction of transcendental value. As Freud remarked, gods and demons are doubles and duplicates of each other. The same could be said of the facts and fictions animating social analyses of social change. Revealing the hidden truths of the commodity fetishism, for example, in order to bring people to consciousness of their own “real” conditions of existence, would give us the answer only to “who-dunit?” This kind of algebraic reason gives the illusion of standing above the fray and outside the time of the world rather than an essential part of

its becomings. The alternative monetary forms here go one better. They do not reveal truths. They restage them. They give us the pleasure and terror of the truth “in the glint of the murderer’s eye,” a reflection of our selves—empty ciphers, like Lear’s?—while lending new meanings to the ditty, “now we have nought but our Selves in our Stocks.”

23. It also relies on a set of notions about scientific and legal facts and evidence. Here, see Poovey 1998; Shapin and Schaffer 1985; Daston and Park 1998; and Shapiro 1991.

24. Quoted in Siegel 1997:15.

25. For these etymologies, see Echols and Shadily 1997: 261.

CHAPTER 4

INNUMERATE EQUIVALENCIES: MAKING CHANGE WITH ALTERNATIVE CURRENCIES

1. From a conversation in the land of HOURS, on “direct barter” relationships.

2. Calculation and comparison entail a specific mathematical world that substitution obviates, or decomposes (Verran 2001). This decomposition, in turn, implies a different cut through the problem of number than usually at evidence in the ethnomathematical literature. See Urton 1997 for a useful discussion. The present chapter is indebted to work that operates to one side of the conventionally ethnomathematical by bringing ethnographic materials to bear on Platonic/Fregian accounts of number; see Verran 2001, Mimica 1992; Lave 1991; and Crump 1990.

3. Although they take different approaches to the problem of money as the general equivalent, all share the underlying assumption that the equivalence function is central: see, for example, Akin and Robbins 1999; Bloch and Parry 1989; Bohannan 1959; Goux 1990; Hart 2000; Leyshon and Thrift 1997; Marx [1865–66] 1997; Polanyi 1957; Simmel [1907] 1990; Taussig 1980; Zelizer 1997.

4. While Appadurai’s call to reconsider the distinction between the gift and commodity is well taken, accepting the common sense of calculation risks solidifying an analytical opposition implicit in accounts of money, that between the sacred and the profane. It also allows Appadurai, as well as Zelizer and others, to maintain their awkward relationship to Simmel, for whom the profanity of money and calculation was a foregone conclusion. On the pitfalls of the Simmelian approach, see Ferguson 1988. On another, related note, Belk and Wallendorf (1990) have written a fascinating compendium of the sacred meanings of money, but do not make the analytical move of seeing the “sacred” in money’s supposedly “profane” meanings, that is, of using their analysis to call into question the sacred/profane distinction.

5. In Maurer 2002c I explore the relationship between individual SSBs in different financial institutions and the creation of transnational Islamic accountancy norms. I argue that the apparent shift from religious to bureaucratic authority in Islamic accountancy is not a struggle between religion and bureaucracy but a sort of complicity. SSBs provide a transnational standards-setting body (the Accounting and Auditing Organisation for Islamic Financial Institutions, AAOIFI) the “data” it needs to devise “best practices” which then, when disseminated, gain SSB seals of approval, in a neat and self-fulfilling prophecy whose main effect is the aura of technical precision for outside observers and regulators.

6. In other words, the DJIM does *not* proceed by seeking out “Muslim corporations.” It assumes that everything that does not violate Islamic norms *is* Islamic, even if not necessarily Muslim. I would like to thank Saba Mahmood for comments on earlier drafts that helped me clarify this section (and I accept all responsibility for the muddles that remain).

7. There is, however, great debate on this topic. See Kamali 1996, 1997, 1999; Maurer 2001a.

8. See, for example, DeLorenzo 2000:73, which maintains that these kinds of issues render *zakat* a process best “left to the individual Muslim investor or depositor,” not the fund managers.

9. As discussed earlier, another vexing convertability issue has to do with the equation between labor-time and HOURS. In principle, one HOUR signifies one hour of labor, of any sort. This concept is absolutely central to the egalitarian and labor-theory of value ideology behind the HOURS system. Many people I talked to expressed concern that some people might “calculate backwards” in order to determine how many HOURS to charge for their labor. In other words, a contractor who “normally” charges \$30–40 per hour might translate that amount into HOURS and ask for 16–20 HOURS for one hour of labor-time. Research on LETS has found similar labor-time convertability issues at stake in those systems (see especially O’Doherty et al. 1999:1645; and North 1999:79 for examples). However, since LETS systems do not use a physical object as currency, the problem of “making change” explored here never arises.

10. Exactly as they did, incidentally, in the post–World War II international financial architecture which defined the international numeraire as the national currency of the United States. See Eckes 1975; Leyshon and Thrift 1997.

11. The more standard translation preserves the sense of the original concluding reference to Goethe’s *Faust*, but is not quite as melodious: “By turning his money into commodities which serve as the building materials for a new product, and as factors in the labour process, by incorporating living labour into their lifeless objectivity, the capitalist simultaneously transforms value, i.e., past labour in its objectified and lifeless form, into capital, value which can perform its own valorization process, an animated monster which begins to ‘work,’ ‘as if its body were by love possessed’ ” (Marx 1976:302).

12. When I have presented versions of this chapter before different audiences, the mousetrap *concept* did not confuse so much as the *term* itself. But consider what a mousetrap does, how it functions: What is the mouse’s crime? The mouse steals the cheese out of the cupboard. How do you catch the mouse? You restage the scene of the crime with an artificial “cupboard” within which you place a piece of cheese.

13. My thanks to Jim Ferguson for pointing out the importance of the parenthetical here.

14. I think my analysis here resonates with that of North (1999) and O’Doherty et al. (1999), who find in LETS a sort of microresistance that is more about engaging a new kind of critical reflexivity in social practice than overthrowing a monetary order. Where these authors are interested in the political consciousness of the actors involved, however, I am more concerned with what we might call the political unconscious, the other dimension of the “lines of flight” North discusses (1999:73), following Deleuze and Guattari (1987).

15. I get the term “social science fiction” from Diane Nelson (1999), who in turn borrows it from Pfohl (1992).

16. Lear has so carefully demarcated the shares of his kingdom that will devolve to Albany and Cornwall, his daughters' husbands, that neither will feel he has been slighted upon examination of the other's inheritance.

17. The 1831 translator, Frederic Rosen, complains that, in the last third of al-Khwarizmi's text, "[t]he solutions which the author has given of the remaining problems of this treatise, are, mathematically considered, for the most part incorrect. It is not that the problems, when once reduced and [*sic*] into equations, are incorrectly worked out: but that in reducing them to equations, arbitrary assumptions are made, which are foreign or contradictory to the data first enounced" (Rosen, in al-Khwarizmi 1831:133). What Rosen misses is that these "arbitrary" numbers are only arbitrary if one assumes number to be referential, which al-Khwarizmi did not.

18. Thus, contra Rotman, I am not convinced of zero's "secular effect" (Rotman 1987:5). The failures of equivalence suggest that the numerical pivot of algebra—zero—did not always deliver on what it promised: equivalence. Rather, zero's mystical associations transformed to hinge on the doubt that failure produced. Zero thus became associated with the remainders left over after attempted equivalence functions.

19. Pascal's work with magic squares points up his complicated relationship to the work of Ramon Lull, the thirteenth-century Christian mystic, and Nicolas da Cusa, the fifteenth-century German scholastic. Each, in turn, had complicated relationships with medieval Islam. I cannot explore this here, but see Burinan 1991; Menocal 1990; Urvoy 1990; Adanson 1995:46 and Armour 1993:17 on Lull; and Smirnov 1993; Jaspers 1957; Hopkins 1980; and Watts 1982 on da Cusa. The mutual participation of each in one field of discourse about number and divinity relieves my own anxieties about relating contemporary Islamic banking to Renaissance and Enlightenment debates within Christendom—these worlds are not so separate as one might wish to believe. See Asad 1993.

20. The ballad tradition in seventeenth- and eighteenth-century England had always found ample material in sea serpents, ghosts and apparitions, and monstrous births (Dugaw 1998:45). During the South Sea Bubble, however, after the naturalization of the monstrous effected by the new science, monsters were considered to be creatures only fools would believe in. To the songsmiths, so, too, was paper credit, based on equivalence, the balance, and zero, an object only for the belief of the overly credulous and women (see Ingrassia 1995). In one popular ballad from 1720, hapless and feminized stock-jobbers react swiftly, and, for their finances, disastrously, to news from landlocked Moscow that a gigantic whale is devouring ships. Rumor and fancy—in a word, fiction—turn the material into the immaterial and back again (Dugaw 1998:55). In their commentary on stock trading, the songsmiths did not distinguish between rumor and information. Both led people to make bad decisions. Both contributed to the demise of the old order. For a newly constituted and investing public, the distinction between fact and fiction collapsed in a frenzy of paper trading.

21. As Žižek admonishes, "It is not sufficient to reduce the form to the essence, to the hidden kernel; we must also examine the processes—homologous to the 'dream-work'—by means of which the concealed content assumes such a form" (1995:300).

22. This is a point Marx realized in his discussion of "fictitious capital" and the relationship between "money-capital and real capital" (Marx 1967:516–17).

23. I am indebted to Jim Ferguson and Liisa Malkki for the first term of this equation.

CHAPTER 5 WISEMAN'S AND FOOL'S GOLD

1. Most onshore jurisdictions place duties or Value Added Tax on gold. On Labuan as an offshore jurisdiction, see J. Abbott 1999. On gold duties and the relationship between gold and offshore financial service centers, see Naylor 1996 and World Gold Council "Gold Information Sheet: Gold Coins and Small Bars," which notes that when taxes have been introduced on gold coins, bullion has tended to flow toward Switzerland, Luxembourg, and the Channel Islands.

2. Murabitun earned the attention of Richard Douthwaite (1996) slightly earlier, appearing in his book on local currencies and community economic empowerment (a book blurbed on the back jacket by Michael Linton, the founder of LETS, as discussed in chapter 1).

3. 2 Cor. 8:12–15: "If a man is willing to give, the value of his gift is in its proportion to what he has, not to what he has not. I do not mean to be easy upon others and hard upon you, but to equalize the burden, and in the present situation to have your plenty make up for what they need, so that some day their plenty may make up for what you need, and so things may be made equal." The Greek uses *ισότης* ("equality"). The term itself is fascinating. Gustav Stählin argues (in Kittel 1967, 3:343–55) that the word drew together mathematical, empirical, moral, political, and spiritual senses of equality and balance, rather than the sense of monetary equivalence, and would have appealed to readers familiar with the Greek political discourse on equality. Stählin suggests the term primarily signified that latter in Greek, and it was the Greek New Testament's specific employment of the word that gathered the other meanings into it.

4. Apologies for the gender-specific term. As will become apparent I have reasons for using it.

5. Apologies, too, for the hypostasization of the market here and its "laws" of supply and demand. Here I merely parrot the opinions of gold market-watchers, for the purpose of opening them up later on.

6. An ironic fact not least because the MUI had successfully killed a national lottery in the 1980s on religious grounds.

CHAPTER 6 MUTUAL LIFE, LIMITED: INSURANCE, MORAL VALUE, AND BUREAUCRATIC FORM

1. This important point is brushed aside in Kindleberger's encyclopedic and authoritative *Financial History of Western Europe*. His blanket statement that "financial institutions were needed to cope with risk efficiently and . . . they developed, at different times in different societies . . . largely in spurts, and in parallel with other financial institutions" (Kindleberger 1984:182) neglects the moral and cul-

other forms of savings and credit and “facilitated the monetisation of the indigenous community.”

8. “Melepaskan kelompok sasaran dari lintah darat; membangun perekonomian Indonesia; menciptakan lapangan kerja.”

9. Virtually identical representations of *takaful* appear in two separate chapters of a book published by the University of Indonesia titled “Concepts of Islam and Economics” (Antonio 1997, fig. 5; and Husein 1997, figs. 4a and 4b).

10. Bowen notes that although many Indonesians imagine the term *gotong royong* to be Javanese, in fact it seems to be of Indonesian (i.e., national state) provenance (1986:546).

11. That several education textbooks contain guidelines on how to instill the spirit of *gotong royong* (e.g., Lie 1999) suggests that this particular nationalist project still has some pull for Indonesians as it is reimagined in the post-Suharto era.

12. Much as in Boellstorff’s (2003) analysis of mass media, where a dubbed television program creates a nonoriginary performance that is never self-contained. The word *corporation* would generally be translated *perusahaan*, after *usaha* (“effort”). It might also be translated *badan hukum* (in the sense of the body corporate at law). In some situations, however, the word *koperasi* might stand in for “corporation,” especially when collective enterprise or investment (as in a joint stock corporation) is being emphasized. It is unclear to me whether this would be considered a metaphorization (a joint stock corporation is like a *koperasi*) or a strict translation. On language ideologies in Indonesia and the linguistic transformation of nationalist discourse, see Boellstorff 2004.

13. I am indebted to Annelise Riles for conversations on means and ends.

14. The contingent effects of the intertwining of the sacred and the secular on the *hajj* itself has received anthropological attention; see Bernal 1994; Delaney 1990; and O’Brian 1999.

CONCLUSION: RESTAGING ABSTRACTION AND ADEQUATION

1. After in the sense of directed toward and seeking to attain, and after in the sense of temporal subsequence, after Strathern 1992a.

2. Unless otherwise noted, references are to the *Collected Papers of Charles Sanders Peirce*, edited by Paul Hartshorne and Paul Weiss (Cambridge: Harvard University Press, 1932); the first number refers to volume, the second to paragraph.

3. In the *Nation* 54 (June 23, 1892), pp. 472–73; in Ketner and Cook 1975: 1:157–59.

4. Peirce explicitly invokes the science of statistics, which, as many (including some of my informants) have pointed out, emerged from post-Pascalian debates over the nature of chance in a world of divine design. For Abraham de Moivre, the eighteenth-century inventor of the bell curve (the maxima of which is central to the argument of Peirce’s book review), the bell curve itself was evidence of divine plan, for “errors” seemed naturally to fall into a regular pattern. See Maurer 2002b.

5. In the *Nation* 82 (January 18, 1906), p. 61; in Ketner and Cook 1975: 3:254–56.

6. Cornel West places Peirce's conservative sentimentalism in the context of an industrializing America undergoing a period of national consolidation (including the fiscal and monetary aftermath of the Civil War, as well as the Spanish American War) and Peirce's and other intellectuals' fears about the erosion of community solidarity and upper-class privilege (West 1989:43–45). Like Bryan, whose famous "Cross of Gold" speech argued that there is no natural basis for value but rather that value is social convention to serve the greater good, "Peirce revel[ed] in the contingency and revisability promoted by the scientific method" (West 1989:47) and an "evolutionary optimism about collectivities, not individuals, in human history" (p. 50). Medieval scholasticism seems a better context in which to situate Peirce's semiotic, and serves to bind Peirce's semiotic to his ethics and evolutionary agapism.

7. As Derrida demonstrates, Benveniste and Heidegger assert that the quality of "being" has degenerated, in human language, into the copula "is," the mark of equivalence (which in some languages, Benveniste writes, is effaced altogether and made mere oral pause or lexicalized absence).

8. Peirce may very well have "wanted to avoid both the revisionary metaphysics of idealism and the promissory notes of physicalism" (Rorty 1991:130). According to Richard Rorty, however, Peirce merely replaced a proposition about correspondence or adequation with one about the progress of human inquiry. I am claiming, in contrast, that the Scotian proposition about the progress of human inquiry remains necessarily welded to the proposition about correspondence, because the former presupposes a community that is the made-flesh of the logos presupposed in the latter. Thus, contra Simmel's simile ("Money is . . . similar to the forms of logic which lend themselves equally to any particular content, regardless of that content's development or combination" (1907) [1990:441]), money is the motor of the *moral* processes of abstraction and adequation that are central to anthropological and other (post-)Baconian modes of fact making and theory building.

9. In references to this work, the numerals refer to the book number, followed by chapter and section numbers.

10. Quoted in Hart 2000:78.

11. There are two Lamechs in Genesis. The first is the last named descendent of Cain; he was the first polygamist and the second murderer (after Cain), but there is no reference to the encounter between him and Adam that Locke imagined, and the only moral lesson suggested regarding his actions is perhaps in his being contrasted with the second Lamech. The second Lamech is the father of Noah, of the line of Seth, who was Eve's third child after God sought fit to give her "issue" to replace the murdered Abel. It was after Seth's first child was born that people began to invoke the name of God, Yahweh. Genesis 4:19–28.

12. The new terms refer to new ideas that fall into Locke's "mixed mode" category; they refer to combinations of different kinds of ideas. The new ideas are also adequate to their objects, since they were produced by Adam's own unique and original combination of ideas without reference to any preexisting archetype.

13. Caffentzis notes (1989:219, n. 19) that the Lockean doctrine of substances found new life in Hilary Putnam's (1996) theory of "natural kinds" and the "baptismal events" through which they are named; Putnam's exemplar is gold.

14. One might ask of Locke, why gold or silver and not lead or iron? The answer comes in the *Second Treatise* and has to do with their scarcity, as well as their durability (they don't rust) and ductility (they're easy to mold into small, transportable items).

15. Briefly, with his first diagram, Eco argues that the name given to the general type "stone" (St) arises once our Australopithecine realizes that his particular stone S1 has a function F and that another stone S2, whether he picks it up or not, is an instance of the general model St. Similarly, when use value is transformed into exchange value, the operation is the same as when S1 and S2 were subsumed under St; here, commodity 1 and commodity 2 are subsumed under an equivalence function (Ev) which represents human labor (HL). "Money" is in the same position on Eco's second diagram as Name was in the first, here a sign of Ev. Finally, and thankfully without the aid of diagram, Eco asserts that the exchange of women operates in the same manner as the commensuration of stones and the formation of money. "The woman, the moment she becomes a 'wife,' is no longer merely a physical body: she is a *sign* which connotes a system of social obligations" (Eco 1976:26). Presumably, W1 and W2 are to S1 and S2 as Wife is to Stone, which leaves unasked the vitally important question of how, if we accept the circulating connubium model, people come to have objectified rights in others in the first place (Collier 1988). This is how we know Eco's hypothetical Australopithecine is a male. Happily, an anonymous reader inscribed the words "Oh Dear . . ." in the margins of the copy of the book that I borrowed from the Australian National University library. For an unraveling of the supposed homology between the exchange of women and the exchange of commodities, see Maurer 2000; see also Strathern 1988; Collier 1988.

16. Compare Brock's comments on Heidegger's neologisms: "Heidegger chooses his concepts, especially if he has to coin them afresh, not arbitrarily and only after long searching reflection and . . . it is the phenomena and the problems themselves which he envisages that compel him to do so" (Brock 1949:145). This, in a commentary on Heidegger's "On the Essence of Truth" that is preoccupied with coins, gold, money, and counterfeiting.

17. Compare Boyle; see chapter 4.

18. Hence, the classic criticisms of Saussure's doctrine of "arbitrariness" in Hjelmslev (1961) and Benveniste (1966), not to mention Jakobson (e.g., 1956; 1990).

19. Available at <<http://www.deceptiondollar.com/mission.htm>>, last accessed May 19, 2003.

20. Once again, I am grateful for conversations with Annelise Riles on these issues.

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Mutual Life, Limited

ISLAMIC BANKING,
ALTERNATIVE CURRENCIES,
LATERAL REASON

Bill Maurer

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