16 The Sociology of Money and Credit

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> Who has gold has a treasure with which he gets what he wants, imposes his will on the world, and even helps souls to paradise. (Christopher Columbus)

MONEY CHARACTERIZES modern economies, but it has been of only intermittent concern to modern sociology. The uneven distribution of money across race, gender, or class has been of central interest to sociologists studying inequality. But money per se seldom preoccupies them. Money functions as the pecuniary "flip side" of market exchange: goods and services go from seller to buyer, while money goes the other way and balances the exchange. Individual transactions join into networks and circuits of exchange that engender parallel flows of money. Money accompanies commodification and the spread of markets. Under capitalism, according to social theorists ranging from Marx and Simmel to David Harvey, the cash nexus has pervaded, subverted, and otherwise transformed social relations. In short, money is an agent of social change.

Credit operates less visibly, although it too pervades market exchange. Indeed, in many economies more transactions are conducted using credit than cash. Credit involves "unbalanced" transactions, when goods and services go from seller to buyer but no money flows the other way. Instead, the seller receives a promise to repay. Credit also concerns intertemporal monetary transactions, when a lender gives money to a borrower in exchange for a promise of future repayment. Since credit involves making and accepting promises, it obviously involves trust.

Here, I describe the connections between money and credit and their roles in the governance of economic transactions and social relationships; I summarize the sociological literature on money and extend it to consider credit, a topic that sociology has mostly ignored. Money and credit have effects that go far beyond the economy, and both are affected by noneconomic factors. As institutions, they directly link to the economy, politics, law, inequality, culture, and other areas of sociological interest. Many of the relevant issues were addressed first by Max Weber and later by Talcott Parsons. Since I intend to examine money and credit rather than Weber or Parsons on these topics, I will not summarize their arguments (Swedberg 1998; Parsons 1982). Nor shall I duplicate reviews of the sociology of money (Blomert 2001; Keister 2002), except to note that the strategy of demonstrating the embeddedness of economic institutions also extends to money (Granovetter 1985). Recent studies of money (Baker and Jimerson 1992; Carruthers and Babb 1996; Dodd 1994; Ingham 1999; Zelizer 1989, 1994, 1996) have all documented how social factors affect it.

I define money as *generalized, immediate, and transferable legitimate claims on value.* Money is important because it commands resources. It functions as a medium of exchange, and as store and measure of value. But this definition needs qualification. First, claims are general only within social communities and spheres of activity. Claims that operate in one place (cowrie shells in eighteenth-century West Africa) do not necessarily work elsewhere (twenty-first-century Evanston, Illinois). Monetary claims exercised on some things of value (shoes) do not work on others (love). Furthermore, money is not always perfectly divisible or fungible. Finally, both claims and the values to which they apply are socially constructed. What constitutes value in one society may be valueless in others. Monetary claims are conventional and depend on self-reinforcing and collective expectations (Orlean 1992): a person accepts arbitrary tokens as money because she believes that others will accept them. Money therefore raises problems of trust. Historically, sovereign governments have

played a key role in the promulgation and enforcement of money claims.

Credit consists of *nongeneralized, deferred, and variably transferable legitimate claims on specific value.* The nongenerality of credit derives from its dependence on one party's obligation to another. A particular creditor has a claim over a particular debtor: Sam owes money to Esther rather than being obliged in general. Sometimes these claims can be transferred to third parties, but frequently they cannot. As credit claims become more easily transferable, however, they become more money-like. Credit involves deferred claims and so is affected by uncertainty about the future. Sovereign governments often specify the forms that credit takes, and help enforce claims, but credit has many times functioned beyond the purview of the state.

My definitions emphasize the difference between money and credit, but intermediate forms exist. As credit becomes more general, uniform, and transferable, it approximates money. No hard-and-fast distinction separates the two kinds of claims. Nor do money and credit exhaust all legitimate claims on value recognized in a particular society. Some people hold claims because of their position in a social network. For example, fathers may have claims over sons (so-called "wealth in persons").

Money

The use of money is highly uneven and differentiated. The perfect fungibility that modern money possesses in principle becomes in practice domesticated and restrained. Like any social object that transgresses boundaries, money is dangerous and impure in Mary Douglas's sense. The restrictions laid upon money reflect not only cultural norms about its meaning and appropriateness (Zelizer 1994), but also ordinary commercial and budgetary practices, and the fact that money flows between and within political jurisdictions. Historically, of course, money was independent of market exchange. In medieval Ireland, people used it to satisfy social obligations and remedy wrongs, not for market exchange (Gerriets 1985; Grierson 1977), and much exchange occurred without money (Spufford 1988, 17–18).

The basis for money has shifted dramatically: in the past, money involved precious commodities like silver and gold, which anchored expectations about money's acceptability. As the bullionists expressed it after the U.S. Civil War, gold possessed "intrinsic value" (Carruthers and Babb 1996). Recently, however, money has become "dematerialized" and "virtual" (Evans and Schmalensee 1999, 25; Leyshon and Thrift 1997). Money is no longer tied to specie but consists of electronic accounts or pieces of paper. Thus, claims about "intrinsic worth" have lost credibility (although gold-standard advocates still exist). Furthermore, the liberalization and the integration of financial markets have been an important part of "globalization": by historical standards, international money flows are now voluminous and virtually instantaneous (Fligstein 2001, 209–13). These developments threaten the connection between money and political sovereignty.

Money and credit have clearly evolved since Marx pondered the "riddle of the money fetish," and this evolution is something economic sociologists have begun to consider. Several developments sparked debate. Economic transitions in Eastern and central Europe problematize the foundations of effective monetary and credit systems. The vitality of the informal sector in many countries, and the prevalence of nonmonetary exchange, challenge orthodox verities about the advantages of money. And continued historical and comparative scholarship has produced a wealth of new empirical findings.

Money Is What Money Does

The standard treatment of money emphasizes three functions. Money is a means of exchange, a store of value, and a unit of account (Stiglitz 1993, 880–83). Thus, money enables economies to escape the limits of barter, which depends on a "double coincidence of needs": person A has what B wants, and vice versa. Money supports multilateral exchange. By facilitating advantageous exchanges, money benefits all who participate in the monetarized economy. Functional money also has a sufficiently stable value that people will accept and hold it for future use. As a unit of account, money permits comparisons and evaluations; it measures the relative worth of commodities and services. Money commensurates alternatives and promotes rational decision-making (Espeland and Stevens 1998). Methods like cost-benefit analysis extend monetary measurement into public policy decision-making. Ideally, money reduces transaction costs and facilitates self-interested exchanges, allows people to accumulate value and make intertemporal trade-offs, and provides a common denominator with which to compare alternatives.

Functionalist discussions of money rarely exam-

ine how money came to perform these functions, whether they are equally significant, if functional alternatives exist, and whether these functions exhaust money's social significance. Money does these things, to be sure, but it is worthwhile considering its other uses. For most economists, money is so transparently advantageous that its existence seems self-explanatory (Jones 1976). Furthermore, economists and sociologists alike have overdrawn the contrast between "modern" money and "primitive" money, and embraced evolutionary arguments about the transition from one to the other (Guyer 1995, 1).

Money and Meaning

In addition to its other functions, money is a symbol that conveys information (Hart 2000, 17). In particular, by restraining and channeling the flow of money, people use it as a bearer of social meaning. Instead of interpreting restricted circulation as a sign that money has failed to perform, we should recognize that such patterns reflect the creation of meaning. Money is a way to communicate messages as well as command resources.

Zelizer (1989, 1994, 1996) documents how restrictions placed on money mark significant social boundaries (Baker and Jimerson 1992; Webley and Lea 1993). She argues against the view that modern money "dissolves" social relations by showing that social relations affect modern money. By confining money to some realms, people affirm cultural distinctions between private and public, male and female, sacred and profane. Restricting money means blocking certain transactions (Andre 1992) and creating separate spheres of exchange (Bohannan 1959; Ferguson 1992). Exchange across spheres is morally problematic, but the separation between them creates differentials of value that entrepreneurs may exploit by spanning structural holes (Barth 1967; Burt 1992). Thus, blocked exchanges and separate spheres are rarely static. This dynamism affects how cultural distinctions get articulated in terms of money, and even alters the distinctions themselves.

The differentiation of homogeneous money occurs in both "modern" and "traditional" societies. People acknowledge separate scales of value, and not just different values, by attaching prices to some objects and rejecting prices for others (so-called priceless goods). Sometimes the meanings are relatively idiosyncratic (a family heirloom), but they may be recognized by an entire community (religious artifacts, public symbols).

Contrasting monetarized from nonmonetarized is one way to elaborate meaningful differences. Another is to construct distinctions within money itself. Zelizer outlines the strategies people use to separate money into qualitatively distinct categories. Some dollars are "honest" and "clean," while others are "dirty" (Verdery 1995). Monies get earmarked by source (they derive from particular activities) or use (they fund specific expenditures). Household budgets are often structured around earmarkings that distinguish among what would otherwise be fungible monies. The classification of money reflects household rules and cultural norms about how to value household activities, and the priorities and obligations of household members. For example, people often treat bonuses, gifts, windfalls, or tips differently than regular wages. "Earned" money has a moral sobriety that unearned money frequently lacks, and hence the latter more often funds whimsical expenditures. Or family members may receive specific monies for discretionary expenses ("pocket money," "pin money"). Historically, women's wages within the family were treated differently from men's (Zelizer 1994, 27). This multiplicity makes modern money more "anthropological" (Dupre 1995).

Money may be used as much to avoid particular connotations as to signal them. Within intimate romantic relationships, men and women frame their expenditures on one another so that it is clear that neither (but especially men) is "buying" sex with money (Zelizer 2002). In contemporary United States, a man can spend large sums (dinner, flowers, etc.) in anticipation of sexual relations with the woman he is dating. And the woman who appreciates such lavish treatment may well consent to sex. But both would reject any similarity with prostitution, although the monetary value and outcome may well be identical.[1] More generally, cash connotes a social distance and anonymity that is inappropriate for certain interactions (Clark 1990, 33, 69; Prasad 1999).

Individuals and households are not the only ones making distinctions. Organizational budgets also involve earmarkings and categories. Budget items possess varying degrees of liquidity, with the most fungible resources put in the most liquid budget category (Stinchcombe 2001, 126–27). The separation of monies into different categories reflects the political commitments and priorities of organizations and their constituencies, and money budgeted into different categories can no longer be treated the same. State governments sometimes

"launder" tax revenues from "unclean" sources by using them to fund "clean" activities. Money from "sin taxes" on tobacco and alcohol products supports particular ends, like public education, partly because these revenues possess a problematic political meaning that must be managed.

In general, the meaning and use of money varies with how it gets classified. Categorical distinctions introduce differences into otherwise uniform and homogeneous money. Such classifications and the meanings they engender derive from how the money flows: where it comes from, and where it goes (Carruthers and Espeland 1998).[2] In moving from place to place, money makes socially contiguous otherwise distinct activities and situations. Inconsistent and even contradictory cultural meanings become linked by money, and the resulting cultural "spillover" poses semantic challenges for those who use money. The activities that generate money vary in their social acceptability, and this colors the resulting cash flow.

In addition to functioning as medium of exchange, store of value, and unit of account, money proves also to be a surprisingly subtle vehicle for the conveyance of meaning. Money works as both an economic and a semiotic instrument, and these two modalities conflict with each other. Money functions better in the economy to the extent that it is truly uniform and fungible. But in using money to send messages, bolster status, and honor important social values, people render it less fungible. This tension rarely achieves a definitive resolution either one way or the other.

Money and Metrology

As a unit of account, money becomes a measurement instrument. The connection between money and quantity is so obvious that researchers often overlook its social aspects (but see Crump 1978). As Marx noted, money represents "values as magnitudes of the same denomination, qualitatively equal and quantitatively comparable. It thus acts as a universal measure of value" (1976, 188). With monetary valuation, qualitative differences became quantitative differences (Cooley 1913). Quantitative measurement involves attaching numbers to objects so that relations among the numbers reflect relations among the objects. Thus, if we measure object A to be 10 on some scale, and B to be 15, we can compare 10 with 15 and say something about A and B (depending on the level of measurement, since $15 \neq 10$, B is different from A; since $15 > 10$, B is more than A; since $15 - 10 = 5$, B is 5 units larger). Quantitative measurement connotes objectivity and precision, and this aura encompasses monetary valuation as well (Wise 1995, 1). A market price appears more "objective" than other measures of value.

Market exchange involves attaching prices to objects, and hence performing a kind of quantitative measurement (Mintz 1961). Thus, the spread of markets has expanded quantification (Porter 1995, 91), although the process is uneven and pushed by other factors as well. Crosby (1997, 31) notes the importance of religion in the quantification of time, and Alder (1995) links the invention of the metric system to nation building that sought to develop the rationality of the French economy. Hadden (1994, 114, 137, 160) argues that early modern commerce helped to develop the mathematical models applied by scientists to the natural world (see also Kaye 1998).

To have an impact, quantitative information needs a receptive audience. Scholars have marked the spread of numeracy in England and the United States (Hacking 1990; Thomas 1987; Cohen 1982), and find that merchants were usually among the most numerate. Overall levels of numeracy were affected by historical accidents like the replacement of Roman by Arabic numerals (Menninger 1969, 287–94). The mathematical skills of contemporary consumers demonstrate the situated and practical aspects of math (Lave 1988). Ferreira (1997) finds that as markets bring arithmetic into the Brazilian frontier, they confront indigenous notions of value and equivalence. Insufficiently numerate audiences are likely to "glaze over" if they face too much complex quantitative information, and rely on rules of thumb and other calculative heuristics.

Porter (1995) notes that numbers are a form of communication used for control. Quantification thus concerns both intervention and description. Numbers get deployed in the context of "mechanical objectivity:" rule-based decision-making that supersedes personal judgment and minimizes discretion. With quantitative information, decisions appear less "subjective" or "arbitrary." Such an appearance depends, of course, on the audience. Porter argues that rules that appear highly constraining to outside audiences may be known to be more flexible to insiders. In the case of accounting information, accountants are much less bound by accounting rules than outsiders believed (although recent scandals have disillusioned them). In general, however, reliance on monetary value expands the use of quantitative information, and grants to

decisions an image of truth and objectivity. Monetarization exposes local transactions to more distant economic influences by inserting them into larger circuits of exchange.

Proximity to market exchange facilitates quantitative measurement. Conversely, multiple or unstandardized monies make quantitative assessments more difficult. As Woodruff points out (1999, 162), the Russian economy of the 1990s used several imperfectly convertible monies, which undercut the ability of Western consultants to value Russian firms. Furthermore, situations arise in which market exchange is unavailable to gauge value. Valuation of assets in bankruptcy court, transfer pricing within a multidivisional firm, and cost-benefit analysis of public policy all pose difficult measurement problems. Given conflicting interests and the conventional nature of accounting rules, the potential for "creative interpretation" is high. However much accountancy seems a rule-governed exercise in the measurement of economic value, it is not (Miller 1994). Accounting rules grant substantial and unavoidable flexibility to accountants, who can be remarkably creative about "massaging the numbers" (Baskin and Miranti 1997, 228, 259). Briloff (1972, 39) shows how different inventory-valuation rules (LIFO vs. FIFO) can alter profits. Depending on when firms recognize income, they can manipulate their income during a reporting period (Briloff 1972, 163). Firms often "smooth" income to make it seem more predictable (Baskin and Miranti 1997, 191). U.S. accounting rules contain fuzzy areas that were exploited during the savings and loan crisis (Calavita, Pontell, and Tillman 1997, 57), and current financial scandals (Enron, WorldCom, etc.) show how easily corporations and their auditors can manipulate accounting information.

Opacity further increases with multiple systems of accounting rules. Cost-accounting emerged in the nineteenth century to measure transactions internal to large corporations (Chandler and Daems 1979; Yates 1989, 8–9). Today business schools train students in cost, financial, managerial, and international accounting (to name just a few). Each involves different rules for producing quantitative information. Furthermore, there are competing systems of rules among capitalist countries. For instance, a transitional economy adopting Western accounting standards can choose between at least three alternatives: GAAP (generally accepted accounted principles), IAS (International Accounting Standards), and the accounting directives of the European Union.

The connection between monetary valuation and quantitative measurement gives the former an image as an objective, neutral, and precise mode of valuation. Determining monetary value involves a complex measurement process that unfolds within a set of rules. Ideally, valuation resembles the "disinterested" mechanical objectivity discussed by Porter, but in fact the rules are often too vague, incomplete, and numerous to prevent interest-driven creative interpretations. Money involves a distinctly numerical form of valuation, in sharp contrast to other modes of valuing (Anderson 1993, 10, 144–45). In this regard, modern money is a singularly reductive and one-dimensional form of valuation. Money may not have dissolved social relations, but in complex ways it has led to a proliferation of quantitative measurement.

Money and Politics

The connections between money, law, and political sovereignty are strong and old, and underscore the political uses of money. States and sovereigns promulgate money for their own purposes, and the other institutions or organizations creating money (e.g., banks) are usually subject to government oversight and accountability. Indeed, money is a public symbol of political sovereignty (Helleiner 1998; McNamara 1998, 2).

Precisely because money commands resources, it has been used for political control over regions, economies, and populations. Many parts of sub-Saharan Africa had indigenous monetary systems that colonial powers like Britain tried to supplant (Lovejoy 1974; Hogendorn and Johnson 1986, 150). Such policies integrated colonies into the colonizer's economy as suppliers of labor and raw materials, and as markets for finished goods. Colonial governments also imposed taxes payable only in cash. These fiscal obligations forced indigenous populations into the monetary economy in order to earn the money necessary to pay hut and capitation taxes (Arhin 1976; Falola 1995; Shipton 1989). Thus, taxes generated wage laborers as well as revenues.

Since prices set the market value of commodities and services, price setting is a distributional process. Prices create winners and losers by determining how much sellers receive, and buyers pay, to accomplish a transaction. Even mutually consensual exchanges can be more or less favorable to the parties involved. Given these distributional stakes, price-setting methods vary in how explicitly "political" they seem to be. The biggest difference lies

between market prices and administered prices. The former appear apolitical, while the latter (whether corporate transfer prices, or prices set by central planners in a command economy) seem explicitly political. Indeed, the Soviet state had to manage the fact that how it set prices transparently burdened its citizenry (Berliner 1950). It had no "market forces" to provide political cover.

To the extent that standardized money reduces transaction costs and enhances exchange, states have a fiscal interest in its provision: more economic activity enlarges the tax base and increases revenues (Levi 1989; Spruyt 1994, 161–63). A ruler who monopolizes the supply of money also enjoys the fiscal advantages of seigniorage. Historically, complete monopolies are rare (see Martin 1977; Timberlake 1981 on nineteenth-century United States), but even when multiple monies circulate, states can use the money supply to their fiscal advantage. For example, during the U.S. Civil War, the Union government went off the gold standard and issued inconvertible paper money ("greenbacks") to meet its expenses (Bensel 1990; 14, 152, 162; Carruthers and Babb 1996, 1561–64). At that time, most paper currency was issued by private state-chartered banks (no Federal Reserve Banks existed before 1913), but the Union government still manipulated the money supply to its fiscal advantage. The National Banking Act of 1863 mandated the establishment of federally chartered banks whose notes would be backed by government bonds (Unger 1964, 15–18). To issue notes (i.e., create money), these banks had to lend to the government by purchasing its bonds. The government taxed state-chartered bank notes to encourage the incorporation of national banks (James 1978, 25). Thus, the Northern government indirectly used privately issued money to finance its deficit.

If the monetary system can increase state revenues and expenditures, it can also restrain public policy. In this regard, the choice of monetary standard has often proven fateful. Around 1870, three monetary standards existed: the gold standard (England, Brazil, Australia), the silver standard (Mexico, Asian countries, Holland, the German states), and a bimetallic standard (United States, France, Italy, Belgium). By 1880, most industrialized nations had embraced the gold standard, an arrangement that persisted until World War I. The transition to gold was contingent on war, domestic politics, trade, and network externalities (Flandreau 1996). The gold standard operated like a monetary rule: governments defined the value of their currency in terms of gold, and maintained the convertibility of their currency at that price (Bordo 1995). Trade imbalances between countries led to international flows of gold that "automatically" affected domestic money markets and interest rates in a way that redressed the trade imbalance. The main goal of central banks was to defend the national currency and maintain its convertibility (Bloomfield 1959, 23). Under the gold standard, central bank policy was *not* aimed at macroeconomic stability, economic growth, or the amelioration of unemployment. Consequently, to embrace the gold standard was to foreclose policy alternatives, including the more active and interventionist economic programs associated with Keynesianism deficit spending.[3]

Although the gold standard is no longer viable, the recent decision by European nations to form a European Monetary System meant greater harmonization of monetary policy and consequently less national autonomy. It is now much harder, if not impossible, for member nations to pursue independent macroeconomic policy (McNamara 1998). As with the gold standard, the choice of a monetary system has clear political consequences.

Most recently, monetary events in Russia illustrate the close connection between sovereignty, public policy, and money. As Woodruff (1999) argues, the authorities in transitional Russia have tried and failed to establish a monetary monopoly. Barter is common, and private monies and quasi monies circulate alongside government-issued money. A single, national currency was intended to help create an integrated Russian nation (Woodruff 1999, 5), but the central government was unable to suppress alternative monies (Woodruff 1999, 92). The other former Soviet republics issued their own currencies, as testament to their political independence, which resulted in a proliferation of currencies in the former Soviet Union (Johnson 2000, 91).

Money is a powerful but blunt political instrument. It is a building block of national markets and helps to integrate communities into a single, interdependent, whole. Money affects the fiscal interests of the state, and although it supports policy, the monetary system can also function as a constraint. Money also engages the symbolic interests of states, as a visible and ubiquitous symbol of political sovereignty.

Making Money

Although public authorities are the most important creators of money, they do not monopolize it.

There are often many kinds of money in use, not just the official currency. In some cases, the authority to create money has been delegated to private parties whose money substitutes for or supplements official money (Hurst 1973, 77). Demand deposits, for example, function as money, although because they involve a claim on an owner's checking account, they vary from owner to owner (Copeland 1981). Banks made money by issuing their own banknotes, and they also increased the money supply by making loans. Today, plastic cards provide yet another means of payment (Evans and Schmalensee 1999, 4). Some types of credit come very close to money. Hoagland (2002, 160) mentions how uneven exchanges between farmers and storekeepers in northern British Columbia were settled with the issuance of a note, by the storekeeper, to cover the balance. Depending on the storekeeper's reputation, such notes circulated locally like money and were used by third parties to settle their own transactions (see Sylla 1976).

Producing money follows a basic pattern. Most critically, "minting work" (Carruthers and Stinchcombe 1999, 366) establishes the self-fulfilling expectations that allow money to function as such. Users need to trust money, and that trust is built around their beliefs about how other users view money. These expectations depend upon the particular audience, and can be anchored in various ways. For example, money creators facing users who believed in the value of precious metal would issue coins containing the relevant metal. Only then could users expect others to accept the money. Such audiences would probably reject paper money or today's immaterial variants. Unfortunately, anchoring monetary expectations to precious metal makes money beholden to various contingencies. Rome's money supply, for example, depended on the balance of trade with extraimperial regions, the productivity of mines, conquest, and booty (Howgego 1992), and nineteenth-century economies felt the monetary effects of silver and gold discoveries (Hurst 1973, 67). Today the European Union does not worry about gold convertibility, but its supporters have been careful to make the euro look like money with respect to form and iconography. Furthermore, the EU intends to ensure that not too many euros get printed so that users will not worry about inflation.

Audiences may be strongly predisposed to support particular kinds of money, and the standards around which expectations get institutionalized can be remarkably durable. Charlemagne devised the pound, worth 20 shillings and 240 pence. This monetary unit, with its idiosyncratic divisibility, survived from the eighth century to the twentieth, and thanks to the British Empire spread around the world (Miskimin 1967). Nevertheless, beliefs about value, and the expectations they produce, are not cast in stone. Much greenback-era political rhetoric targeted the labile monetary expectations of the American public (Carruthers and Babb 1996).

Governments create money using "legal tender" status. By fiat, they can empower a particular money token so that it satisfies legal debts, public and private (Hurst 1973, 44). Thus, a creditor cannot legally enforce a debt if the debtor has repaid in legal tender (David 1986). Of course, the power to create legal tender has limits when debtors and creditors use extralegal or informal means to conduct their transactions. Furthermore, the expectations of money users may conflict with a government's wish to bestow value on fiat money. Although the Union government made greenbacks legal tender, most British suppliers refused them, insisting on payment in gold. The limits of legal tender status were reflected in the gold price of the greenback, as $100 worth of greenbacks fell from $96.60 in February 1862 to $35.09 in July 1864 (Mitchell 1908, 6).

A final issue concerns standardization. To be perfectly fungible, all monetary units must be the same, and their magnitude easy to measure. Complete standardization means that money units vary only in quantity, not quality. In earlier eras, the physical standardization of coins was the chief problem to solve. Given minting technology, money makers could produce coins within fairly well defined tolerances. But coin-shaving was always a problem as users tried surreptitiously to remove marginal amounts of metal from each coin. And issuers themselves sometimes adulterated the coinage (a strategy that led to inflation). Thus, the history of metallic money often consisted of slow but steady degradation, punctuated by recoinages in which money would be reminted.

Standardization works differently with paper money. Antebellum U.S. banknotes differed not because they conformed to different units (all were dollar denominated) but because their real value varied by issuer. A one-dollar bill issued by a solvent bank was worth more than a dollar issued by an insolvent bank. And since regulatory standards differed by state, what constituted "insolvency" also varied across jurisdictions. Gorton (1996) discusses how people managed nonstandardized

money, but a better solution came with greater standardization. The National Banking Act created a more uniform currency by creating more uniform issuing banks (national banks all conformed to the same regulations, see Hurst 1973, 64; Sharkey 1959, 29). And the Federal Reserve System brought even greater uniformity to money.

Yet another mode of standardization occurs with electronic money. To make payment cards effective, promoters had to build an elaborate organizational structure to coordinate high volumes of information about issuing banks, and the credit limits and expenditures of millions of individual cardholders. This informational structure ensured that merchants could treat a Visa card issued by Citibank like a Visa issued by the First National Bank of Skokie. In order to achieve such equivalence across thousands of issuers, and millions of merchants and cardholders, card promoters had to wrestle with critical network externalities (Evans and Schmalensee 1999, 65, 149). For cardholders to hold a particular card, they had to believe that it would be accepted by many merchants. For merchants to accept a particular card, they had to believe that it would be used by many customers. Since at first there were neither cardholders nor accepting merchants, card promoters undertook a kind of "expectational bootstrapping" to create these self-fulfilling beliefs.

Money and Barter

Nonmarket exchange or special forms of valuation exclude money. But money may also simply be unavailable for ordinary exchange. In such circumstances, people use barter or credit to accomplish their exchanges. Standard economic treatments argue that money is superior to barter (Banerjee and Maskin 1996; Stiglitz 1993), and that primitive barter economies will perform better after the invention of money. Yet scholars find that money and barter coexist (Barnes and Barnes 1989; Hendley 1999; Humphrey 1985), and no simple or inevitable shift occurs from barter to money.

Economic actors sometimes use barter as a form of concealment. Money facilitates exchange, but it also facilitates the measurement of exchange by governments. The cash nexus is a convenient detection device for tax authorities, among other things. Firms wishing to avoid taxation, or which otherwise want to disguise their activities, can barter. Individuals who wish to earn untaxed income will also undertake in-kind exchanges and in effect join the informal economy (Nove 1989, 51).

Barter is common in contemporary Russia and other transitional economies (Carlin et al. 2000; Johnson 2000, 163). Some firms barter to avoid taxation, or because they or their trading partners are technically insolvent (Hendley 2001, 30; Johnson 2000, 107). Barter allows firms to evade the legal constraints that insolvency imposes (e.g., the right of creditors to seize a debtor's bank accounts). Humphrey (1985) claims out that barter works better in informationally rich environments, where the two parties know a good deal about each other.

Credit

No sharp line separates credit from money. Both involve legitimate claims on value and both facilitate exchange. Furthermore, both raise trust issues, albeit in different ways. Where money does not or cannot change hands, many use credit to accomplish their exchanges. Thus credit substitutes for money, and functions as the great expeditor of commerce (Inikori 1990). Historically, the money supply typically could not cover all exchanges, and so a substantial proportion of exchange occurred using credit (Anderson 1970; Balleisen 2001, 28, 44; Hoppit 1987, 133–34; Earle 1989, 115; McIntosh 1989; Nightingale 1990; Parker 1973, 9; Thorp 1991). Yet, as a topic, credit has been largely neglected by sociologists (Wiley 1967 is an exception).

Like money, credit commands resources, and so uneven access to credit has similarly important implications for social inequality (on mortgage-lending discrimination, see Yinger 1995; Ladd 1998; Munnell et al. 1996). Control over credit serves as a basis for economic and social power, and this insight has motivated a substantial literature on the power and centrality of banks within capitalist economies (Keister 2002).

Credit arises when one party lends money to another, or when one sells to another in exchange for deferred payment (trade or consumer credit). Credit involves intertemporal exchange, and most simply one party completes its side of a transaction at time 1, while the other meets its obligation at time 2. Until time 2, the second party (the debtor) is indebted to the first (the creditor). The magnitude of the debt is simply the money-value of whatever the creditor gave to the debtor at time 1.

To extend credit, the creditor must trust that debtors will repay. Unlike money, the trust problem posed by credit is very specific. For money to

function, transacting parties have to trust it: they must believe that what they receive is authentic money that will retain its purchasing power over the short run. Money functions effectively when people trust money as an institution. The creators of money do a number of things to make money trustworthy, but once that trust problem gets resolved, it is resolved generally. For credit to function, however, the creditor has to trust a specific debtor at a particular point in time: will she repay in a year's time? Trust problems in credit cannot be resolved globally since they arise out of specific debtor-creditor pairings.

Heimer (2001) argues that trust involves two features: vulnerability and uncertainty. Person A is vulnerable to the actions of B, but is not sure what B will do. Can A trust B? If A lends money to B, A trusts B to repay the loan. A is vulnerable to B depending on the loan size, and because repayment occurs in the future, A cannot be certain what B will do. The effects of these information asymmetries on credit markets have been analyzed in the economics of information (Stiglitz 2000). People manage trust situations by reducing their vulnerability or their uncertainty, or both. They try to make the trustworthiness of the other person less relevant to their own interests (reduce their exposure), or they learn more about what that person will do.

Both strategies figure prominently in credit, and can be pursued individually, collectively, or institutionally (Guinnane 2001). For example, with reliable commercial law, lenders may obtain collateral for their loans, and have the right to seize assets if the borrower defaults. Attaching collateral reduces the creditor's losses, and makes the creditor less vulnerable. Creditors also acquire information before making a loan, in order to distinguish between trustworthy and untrustworthy borrowers. In gathering information, creditors focus on both the ability and willingness of the debtor to repay.

Credit is as old as money (Cohen 1992; Lopez and Raymond 1990), and although the problems of vulnerability and uncertainty have plagued creditors for millennia, the solutions vary. Credit depends upon a number of factors: the debtor, the creditor, the formal contractual and informal social relationships between them, intermediaries, third-party networks, and the commercial-legal framework. These factors sometimes covary systematically. For example, problematic contract law may force creditors to rely on other means to secure repayment. A creditor making loans in a country with an unreliable legal system typically uses informal social ties, or intermediaries, to assess and enhance the trustworthiness of the debtor.

Debtors

In deciding whether a debtor can be trusted, creditors focus on the qualities that affect the capacity and willingness of the debtor to repay. Historically, information about these features was hard to obtain, but the focus was more on willingness than capacity. Would a particular debtor repay a loan if he or she could? Did the debtor keep his or her promises? In the eighteenth and nineteenth centuries, the issue was construed almost entirely in terms of the debtor's reputation (Defoe [1726] 1987; Earling 1890; Grassby 1995, 299–300; Hilkey 1997; Hoppit 1987, 164; Prendergast 1906, 93), and character remains an important consideration for lenders' decision making (Newburgh 1991). The problem of trust had been translated into the question of personal moral fiber, and the problem for creditors was how to detect the outwards signs of good character. Assessing character inevitably mixed pop-psychology, stereotypical attribution, and outright discrimination. And given the importance of perceptions, debtors found themselves of necessity conforming to the stereotypical signals of good character (Burley 1987; Lynd and Lynd 1929, 47).

Creditors also had to worry about the capacity of the debtor. Was the debtor solvent? Would the debtor's cash flow cover the loan? Such questions were for many centuries extremely hard to answer, largely because of the absence of reliable financial information (Olegario 1998, 177). Even debtors themselves had a hard time calculating the profitability of their own operations (Carruthers and Espeland 1991). But the development of accounting standards, the imposition of regulatory and disclosure requirements, and the emergence of credit rating all made it easier for creditors to learn about debtor finances (Balleisen 2001, 146–51; Cantor and Packer 1995; Kerwer 2001; Leyshon and Thrift 1999; Madison 1974; Pixley 1999; Santiso 1999; Treacy 1998). This informational infrastructure has transformed what creditors could know about debtors.[4] As recent U.S. financial scandals have demonstrated (e.g., Enron, WorldCom, Qwest), however, no regulatory framework, expert rating apparatus, or set of accounting rules is proof against subversion and creative misinterpretation.

How debtors intend to use the loan affects their willingness and ability to repay. Since trade or consumer credit underwrites specific purchases, it is

clear what the money is for. In other situations, money that generates cash flow (e.g., investing in a factory) is more likely to produce a solvent debtor than money used for consumption. Banks view firms with good business plans more favorably than those without. For individual debtors, the different meanings of money come into play and affect a debtor's sense of obligation. Someone who borrows for a frivolous purpose, like gambling, may not feel as encumbered by the debt as someone who borrowed to pay for his or her daughter's wedding.

The ability to assess a debtor's capacity and willingness to pay was affected by the shift from individuals to organizations. Consumer finance involves individuals, but business finance has been transformed by the rise of large corporations (Perrow 2002). Firms have "legal personality" (the right to own property, enter into contracts, etc.), but they do not have psychological personalities, that is, predispositions to keep promises. Thus, assessing a corporate debtor's willingness to repay is problematic, and creditors cannot simply examine a firm's "moral fiber." Lenders can, however, evaluate the personal character of top management (Standard and Poor's 2000, 19–22). The ability of creditors to assess capacity to pay has certainly been enhanced by the fact that publicly traded firms are subject to various filing and disclosure requirements. These regulations, and the information they generate, vary across jurisdictions, but they have created a considerable amount of public information (Sylla and Smith 1995). The case of sovereign debtors poses a particular set of problems for creditors, not the least of which is that enforcing loan agreements can be problematic (Eaton 1993). Despite this complication (or perhaps because of it), public borrowing has been a driving force behind the development of many financial institutions and instruments (Carruthers 1996; Weir 1989).

Creditors

Credit depends upon who extends credit and for what purpose. Some creditors must lend, but choose whom to lend to. In the colonial United States, for example, retailers had to extend credit to customers in order to make a sale (Rosen 1997, 41). Given the scarcity of money, to insist on cash would have guaranteed almost no sales at all! Customer credit remained important for mass retailers like Marshall Field's (Twyman 1954, 7, 129), and the institutionalization of installment lending was one of the great financial innovations of the consumer economy (Gelpi and Julien-Labruyère 2000; Lynn 1957; Olney 1999). Today, extending credit to customers continues to play an important part in sales. Sellers try to avoid the uncreditworthy, but a firm overeager to sell may be too optimistic in evaluating the creditworthiness of potential customers.

Philanthropic lenders have a different set of goals. James (1948) discusses how English charitable endowments made loans to help the "needy" rather than to generate income. Charitable institutions were often founded to compete with other, less scrupulous lenders. In the eleventh century, monasteries and other religious houses were important sources of funds (Jordan 1993, 29, 62, 64; Little 1978, 15). The *monti di pietà* of Renaissance Italy helped to protect the poor from usurers (Parker 1973, 12). Many of the savings banks founded in nineteenth-century United States had charitable purposes (Alter, Goldin, and Rotella 1994), and similar institutions (e.g., credit cooperatives and remedial loan societies) were established in the early twentieth century (Ham and Robinson 1923). Philanthropic lenders are less concerned about earnings, and more concerned that borrowers truly deserved assistance.

Philanthropic lending is perhaps the most obvious case where noneconomic goals shape credit, but noneconomic motivations matter more generally. Muldrew (1998) argues that a "moral economy" prevailed in the local credit markets of early modern England. Credit represented an opportunity to demonstrate neighborly values, and so to privilege profit was culturally inappropriate (Davis 2000). In the same period, two rules of exchange applied in western Massachusetts. For local credit transactions, members of the community tempered their profit seeking with a communitarian sensibility that stressed cooperation and informality. For long-distance trade, people adhered to relatively formal, confrontational, and self-interested logics (Clark 1990, 27, 30–31, 35–37; see Breen 1985, 93; Konig 1979, 82, 84).

Lending also occurs for political reasons: to reward followers, build networks, or create supportive constituencies. Creditors pursing political goals do not worry about uncertainty or vulnerability in the same way. In czarist Russia, policymakers tried to establish rural credit cooperatives to help build an independent, politically conservative peasantry (Baker 1977). The attempt failed, but the goals were clearly both political and economic. According to Flam (1985), mortgage lenders used their loans in the real estate market to break the power of silk-mill workers in early-twentieth-century

New Jersey. In the postemancipation South, landlords employed credit to secure control over a nominally free black workforce. New lien laws granted landlords as creditors draconian powers over their sharecropping tenants (Woodman 1995, 39, 65, 114). Elites in the Bahamas were similarly able to use the credit system to control the workforce (Johnson 1986).[5] And Jordan observes that ecclesiastical institutions in colonial Mexico made mortgage loans to cultivate local elites (Jordan 1993, 61–62).

Formal Debtor-Creditor Relations

A loan contract between a debtor and creditor offers some reassurance that the debt will be repaid: if the debtor defaults, the creditor can use the law to secure repayment. Obviously, the effectiveness of contracts depends on a predictable legal system (Weber 1978, 1095; 1981, 276–77). Following the development of commercial law, the efficacy and the complexity of loan contracts have evolved, tracing out a gradual but never complete "formalization" of credit (Winn 1994). An eighteenth-century merchant could obtain a loan with a simple IOU, and in the 1830s the first railroads sold bonds using a three-page bond indenture (Rodgers 1965, 552–55). By the end of the nineteenth century, however, U.S. railway bond indentures were 300 pages long.

Loan contracts follow well-defined forms, some of considerable antiquity. A modern mortgage, for example, gives a lender contingent property rights over an asset of the debtor, and in the event of default the lender may activate those rights. Collateral reduces the creditor's vulnerability and bolsters the debtor's willingness to repay. In Europe, mortgage contracts go back at least to the twelfth century (Barton 1967; Berman 1982), although they differed from modern mortgages in that the lender held the collateral until the loan was repaid.[6] As mortgages evolved, the type of property securing the loan shifted from realty to personalty ("chattel mortgages"), and more recently to property that the debtor will possess in the future ("floating charges"; see Reeder 1973).[7] Another ancient contractual form was the *commenda*, a combination loan and partnership (Weber 1981). In the early Middle Ages, these funded long-distance trade and laid out the rights and obligations of the two parties (the *commendator* and *tractator*; see Pryor 1977; Udovitch 1962).[8]

Other elements of modern loan contracts address vulnerability and uncertainty, and so try to remedy the problem of trust. "Restrictive" or "protective" covenants constrain what the borrower can do in order to increase the likelihood of repayment, and they often require the provision of information to lenders. For instance, some covenants restrict the debtor's investments or total indebtedness, while others provide for financial statements, and a periodic statement of compliance (Calomiris and Ramirez 1996; Smith and Warner 1979). Other covenants restrain the fungibility of money through a kind of earmarking. These "attach strings" to the loan to ensure that money is used only for purposes approved by the lender. In addition, lenders can specify terms (loan size, duration, interest rate, etc.) to set their vulnerability in proportion to the uncertainty they face (more risk means higher interest rates).[9]

As Anglo-American legal systems have developed, credit transactions have become increasingly governed by formal contracts. In colonial New York, for example, people increasingly turned to the courts to collect debts, and so civil litigation rates increased (Rosen 1997, 83, 85). Mann (1987, 27–28) finds that in Connecticut, formal written debt instruments gradually displaced informal book debt. Of course, informal lending continued, but as the legal framework developed, debtors and creditors de-emphasized informal means for enforcing debts. Scholars observing the importance of informal relationships in contemporary Russia attribute this to the underdevelopment of the legal system (Kali 2001, 211). Even when commercial law on the books seems adequate, its implementation may leave much to be desired.

Legal evolution has also produced negotiability, a critical feature that makes debts more like money. In traditional common law, a debt could not be transferred to third parties (Carruthers 1996, 127–31; Cook 1916). Only the original creditor could enforce the claim. Thus, aside from asserting the claim, a creditor could do little with a debt. Negotiability means, however, that the original creditor can transfer the debt to a third party, and use the claim to satisfy obligations to others (Freyer 1982; Weinberg 1982). This allows a debt to function like money. Negotiability transforms the enduring relationship directly linking debtor and creditor into a much more impersonal relationship that conjoins two social roles (Mann 1987, 37).

Informal Debtor-Creditor Relations

Developed commercial laws help manage the trust problems that afflict credit, but these are a historical rarity. Much lending in the past occurred when laws were unsophisticated or unreliable, and

even today considerable informal lending occurs. Social relationships between debtors and creditors can sustain rich flows of credible, detailed information and support informal sanctions or social obligations to help enforce agreements (Hoffman, Postel-Vinay, and Rosenthal 2000, 65–66; Ottati 1994; Udry 1994; Uzzi 1999). In transition economies, social ties enhance trust and trustworthiness, and so facilitate credit (Keister 2001; Treisman 1995). Social networks also influence the goals of debtors and creditors.

Extensive evidence documents the impact of social relationships on credit. Early modern merchants needed credit, whether as working or fixed capital. Sometimes they obtained trade credit by simply delaying payment to their suppliers, but otherwise merchants looked to their family or friends for money (Brettell 1999; Earle 1989, 108, 110; Grassby 1995, 84–85; Hancock 1995, 242–43). Marriage often injected new capital into the firm (Hunt 1996, 23).

For some scholars, the connection between credit and social relations illustrates a more general pattern where social relations constitute resources to achieve economic ends (e.g., Greif 1993; Landa 1994). Relationships between bankers and small business owners, for example, solve information problems (Berger and Udell 1995). By this "rational embeddedness" argument, market actors exploit their social ties. Padgett's (2001) analysis of Florentine banking at first appears to document this pattern, but he rejects instrumentalist interpretations and shows how a succession of social forms were imposed on, and constituted within, the organization of banks and banking careers. He claims that different social forms and networks brought different "logics of identity" to the operation of banks. Rather than argue that bankers rationally "exploited" their family, guild, or political connections, Padgett recognizes that these networks induced particular identities that activated the interests that market actors pursued.

Some credit institutions are built directly out of informal social relationships (Anthony 1997; Neifield 1931). Rotating credit associations use ethnicity, friendship, or some other social tie, to pool and mobilize capital. Today, they are found around the globe (Biggart 2001; Falola 1993; Light and Bonacich 1988, 243–72; Sterling 1995), commonly among groups with limited access to formal financial institutions. Similarly, the Grameen Bank and other microcredit institutions create credit by putting borrowers into groups, where they can keep each other "honest." Loans are made to individuals, but if any single person defaults, the entire group is denied credit (Pitt and Khandker 1998).

Lamoreaux's study of nineteenth-century New England banks demonstrates the importance of social networks. Bank loans were typically made to bank directors, their friends and family, or to someone with a direct tie to the bank (Lamoreaux 1994, 4, 15). "Insider lending" was widespread, and understood to be normal. Lamoreaux suggests that one advantage of "nepotistic" lending was that loans could be enforced by social as well as legal sanctions (Lamoreaux 1994, 26). Only at the end of the century did banks establish separate credit departments, charged with the task of assessing the creditworthiness of noninsider borrowers (see also Beveridge 1985; Wright 1999).

Third-Party Networks

Credit depends on the direct ties between debtor and creditor, but also on the connections they both have to third parties. Creditors sometimes deem debtors more creditworthy depending on the kinds of networks to which they belong. Relationships inducing obligations to or from debtors draw them into social networks that constrain what they do. A debtor who enjoys the support of others is more likely to be a good risk (Balleisen 2001, 73). Thus, someone with a wealthy family that can guarantee a loan will be more creditworthy. As well, a debtor whose networks induce obligations to others may also be a better risk. Married men were traditionally deemed more creditworthy than single men because their family obligations rendered them more responsible (Earling 1890, 83–84). If a debtor's third-party obligations compete with the claims of the creditor, however, then debtors will be considered less creditworthy. Creditors want to know if a debtor owes money to anyone else.

A creditor's third-party ties also matter. Creditors are often embedded in their own network of financial obligations, and so their willingness to lend is affected by their ability to borrow. Consider a retailer who borrows from suppliers and lends to customers. If suppliers pressure for repayment, the retailer will have to scale back its own credit operations. When one party tightens credit, the effects reverberate throughout the network (negotiable instruments can moderate these effects since they allow creditors to use the debts owed them to repay their own debts). Creditors may also form syndicates to share the risks involved with a particular loan.

One debtor's situation may be influenced by a creditor's other debtors. If a particular debt is part

of a portfolio of loans, then whether the loan is made and how it is managed depend on the overall portfolio. Consider a modern home mortgage. In deciding whether to make a particular loan, a lender evaluates the idiosyncratic value of a home. The lender also assesses the borrower's current and future finances. This decision requires detailed information about both the borrower and the house that will secure the loan. A less informationally intensive strategy involves grouping similar mortgages into portfolios, estimating overall loan performance, default rates, and so forth, and then using them to set interest rates. Rather than assess individual loans, the lender performs actuarial calculations across a group of loans and simply builds the likelihood of default into the interest rate. Public agencies like the Federal National Mortgage Association (Fannie Mae) have helped to standardize mortgages, and made it easier to put them into homogeneous pools (Jensen 1972). The development of securitized home mortgages embodies this portfolio strategy (Carruthers and Stinchcombe 1999; Kendall 1996).

Mutual third-parties can function as intermediaries (Moulton 1920). They connect debtors with creditors, and in effect span structural holes in the credit market. They help resolve the information problems that creditors face, and sometimes provide formal or informal guarantees about borrower performance. In the nineteenth century, western farm mortgages were often originated by local mortgage companies that sold the loans to eastern investors (Brewer 1976; Snowden 1995). The local company acted as a mortgage matchmaker. In early modern France, intermediaries played a critical part in Parisian credit markets (Hoffman, Postel-Vinay, and Rosenthal 2000). The role of the notaries evolved from that of clerks transcribing loan documents to financiers linking lenders to borrowers. Notaries inserted themselves between the other two parties, undercutting direct ties between lenders and borrowers and intermediating between them (Hoffman, Postel-Vinay, and Rosenthal 2000, 114). In Burt's (1992) terminology, the notaries created a structural hole and then bridged it. Their actions increased the flow of funds across social boundaries (gender, class, and neighborhood) as debtors and creditors relied less on their own homophilous social ties.

Legal Framework

Debtors and creditors use contracts to regulate specific transactions, but these transactions are governed more generally by bankruptcy and insolvency laws. Such laws determine what happens when a debtor becomes insolvent. Each creditor has a claim on the debtor, and bankruptcy law simultaneously reconciles multiple claims within an encompassing framework. The problem is that insolvent debtors cannot meet all their obligations (Jackson 1986). The losses must be shared among the claimants, and so bankruptcy becomes a distributional process. Bankruptcy generally leads to either liquidation or reorganization (Carruthers and Halliday 1998, 35–42, 252–66). In the case of liquidation, bankruptcy law ranks creditors, recognizing that some have stronger claims than others (e.g., secured creditors enjoy higher priority than unsecured creditors). The threat of insolvency often sets off a "rush to the assets," as creditors grab what they can. Bankruptcy law forestalls the rush and provides for a systematic distribution of assets. Those with the highest priority are paid first, and claims are satisfied in order until all the assets are exhausted. The lowest-ranked claimants often receive nothing. In the case of corporate reorganization, bankruptcy law provides a venue in which to register claims and negotiate a financial and operational restructuring of the firm. Unprofitable divisions may be sold off, wages reduced, debt swapped for equity, and so on. Bankruptcy law determines the bargaining rules, shaping how much bargaining power each party enjoys in the negotiations.

Centuries ago, bankruptcy law was little more than a coercive mechanism for throwing debtors into prison (Coleman 1965). As bankruptcy laws developed, however, they distinguished between individual and corporate debtors. Individual bankruptcy usually involves a procedure in which the debtor hands her assets to a court-appointed administrator or trustee, who distributes them to the creditors. The debtor enjoys a "fresh start," with all prior debts discharged (Sullivan, Warren, and Westbrook 2000, 5, 12, 170). Sometimes, certain classes of property are exempt from the proceedings, and insolvent debtors are allowed to maintain possession. Additionally, some debts are nondischargeable. In the United States, for example, child support payments cannot be discharged by a bankrupt debtor.

Bankruptcy laws now differentiate corporate liquidations from reorganizations, and procedurally favor one over the other. People are not indifferent between the two: managers, employees, and shareholders prefer reorganizations, while secured creditors prefer liquidations. Secured creditors enjoy a

high priority, and so in a liquidation they get most of their money back. Shareholders almost always receive nothing, and managers and workers simply lose their jobs. By contrast, a reorganization is like an asymmetric gamble. If successful, the firm survives, creditors are repaid, employees keep their jobs, and shareholder value grows. But if the firm fails again, the managers, workers, and shareholders all suffer, and in addition the secured creditors lose. A reorganization can benefit managers, workers, and shareholders, but it can only hurt the secured creditors. Laws vary in their emphasis on the two alternatives: "debtor friendly" laws encourage reorganizations, while "creditor friendly" laws emphasize liquidation. Legal reform can shift the balance from one to the other (Carruthers, Babb, and Halliday 2001, 105–8; Skeel 2001).

Bankruptcy law applies only in situations of financial distress, but it casts a long shadow over lending. In particular, creditors worry about their vulnerability in legal environments that are too "debtor friendly." Economists argue that creditors' rights have an important effect on investment and growth (La Porta et al. 1998; Levine 1998). Indeed, many of the reforms imposed by the IMF on Indonesia, Thailand, and South Korea after the 1997 Asian financial crisis were motivated by the conviction that foreign creditors would not invest in those countries unless bankruptcy systems were made more "creditor friendly" (Eichengreen 1999, 28, 33). Nor could these economies adequately restructure without effective laws.

Real credit processes combine these factors together: the creditor's goals, the debtor's goals, character and financial standing, formal-contractual and informal-social relationships between debtor and creditor, the third-party ties of both, and the overall legal framework. Running through all factors are the problems of vulnerability and uncertainty. Each situation involves a particular configuration, so that which factors dominate, and how they interact, varies considerably.

Money and Credit

Money and credit facilitate market exchange and function as substitutes. Where money is absent, people turn to credit, and as credit develops, people depend less on money. Changes in the value of money directly affect credit: inflation hurts creditors and benefits debtors, while deflation has the opposite effect. Priest (2001) points out that debt litigation in colonial New England peaked during monetary crises as debtors and creditors responded to inflation or deflation.

One important parallel between money and credit concerns the role of government. Public authorities have long created and maintained money, and the state's role reflects a legitimate public interest. Even when the creation of money devolves to private actors like banks, they are almost always subject to public oversight. The involvement of the state injects politics and sovereign interests into the monetary system. Political conflict may occur over the definition of money, as in the case of postbellum America, or gold-standard countries versus silver-standard countries (Breckenridge 1995). Sovereigns sometimes devalue the currency.

Although credit is not so closely linked to sovereignty, public finance has been a driving force in the creation of credit instruments and institutions (Roseveare 1991). Furthermore, even before the rise of nation-states, credit was socially regulated. Following an Aristotelean theory of money, the medieval church prohibited usury as a sin (Kaye 1998, 79–80). This prohibition did not apply to all credit transactions (annuities were exempted), but even so lenders found ways to circumvent it (Helmholz 1986). Similar proscriptions (and circumventions) occurred in other societies (e.g., Sharma 1965), prompting Weber and others to consider more general explanations of usury (Weber 1981, 267–71; 1978, 583–89; Nelson 1969). The prohibition relaxed over time, first becoming secularized, and then proscribing interest above a certain level. Most usury laws were eventually repealed, but some still remain (Holmes 1892; Calder 1999, 114).

Governments actively shape credit, sometimes as part of an overall development strategy in which government decides which industries receive capital (e.g., South Korean "policy loans"; see Woo 1991). Their ability to dictate investment flows depends on the structure of the financial system: state intervention is easier in bank-dominated than market-dominated systems (Loriaux 1991; Zysman 1983). As part of its redistributive agrarian reforms, Nicaragua's Sandinista government directed credit to small and medium-size farmers (Jonakin and Enriquez 1999).

In most instances, public regulation of credit is less ambitious. After the Civil War, insurance companies became the biggest nonbank financial institutions. Although they mobilized large pools of capital, insurance companies were prohibited from making risky investments. New York insurance companies could not hold out-of-state mortgages (Haeger 1979; Keller 1963, 127). Few states al-

lowed insurance companies to invest in corporate securities, a restriction that was later relaxed so they could purchase "investment grade" securities (as defined by rating agencies). Savings banks and state banks operated under similar restrictions (Van Fenstermaker 1965, 15–17, 49). Early on, the New York City Mutual Savings Bank could only buy New York State or federal government bonds, making it virtually a captive lender to the state. Gradually, these restrictions were lifted to permit investment in New York canal bonds, other state bonds, mortgages, and eventually call loans (Olmstead 1976).

Governments can also influence credit indirectly. For a mortgage to work, creditors must be able to seize the underlying real estate if the debtor defaults. Unless the creditor can take possession, the loan is effectively unsecured. In the late nineteenth century, many British investors put their money into U.S. farm mortgages. When farmers defaulted, lenders seized their land. The prospect of British ownership of American farmland offended nationalist sensibilities, and so many states restricted foreign ownership of land (Clements 1955). These discriminatory laws discouraged British investment in farm mortgages by undermining the ability of foreigners to exercise their property rights as mortgagees.[10]

A different kind of discrimination operated in federal housing policy. The underwriting, lending, and insurance standards institutionalized by the FHA (Federal Housing Administration) and HOLC (Home Owners Loan Corporation) have played a substantial role in encouraging investment in suburban, middle-class, single-family dwellings and discouraging investment in multiunit dwellings in poor urban areas (Jackson 1985; Massey and Denton 1993; Squires and O'Connor 2001). In effect, these standards deterred lending in minority neighborhoods.

Even when government does not intervene to encourage or block particular flows of credit, it may still prudentially regulate debtor-creditor exchanges. Many U.S. states passed small-loan laws to ameliorate the situation of small borrowers (Nugent 1934; Phelps 1951). The Russell Sage Foundation promoted a model small-loan law and urged passage on state legislatures (Robinson and Nugent 1935). In subsequent years, similar laws have passed at the state and federal levels to shift credit markets away from caveat emptor. Laws regulating retail installment lending had a similar political motivation (Mors 1950). Prudential measures often function to make some market actors more trustworthy and others less vulnerable.

A second parallel between money and credit concerns fungibility (the homogeneity and interchangeability of modern money). Every genuine $100 bill has the same purchasing power, and all are equally capable of satisfying a $100 debt. A person who borrows a car is supposed to return the same vehicle, but a person who borrows $100 does not have to repay the exact same bill. Money is fungible, but cars are not. Fungibility gives money the generalized purchasing power that makes it so useful, but this can also be a problem. Fungibility means that the money given to Sam by his mother to pay for a haircut can be surreptitiously diverted to purchase candy.

From Zelizer, we know that users often inscribe into fungible money a set of distinctions that render it heterogenous. Money is classified (budgetarily, normatively, or cognitively) into different categories, and these disrupt the fungibility of money. Monetary distinctions reflect larger cultural distinctions and organizational commitments. The strength of these boundaries and the vigilance with which they must be maintained (e.g., sharp distinctions between "clean" and "dirty" money, or between monies earmarked for different budget items) derive from the underlying fungibility of modern money. Modern money is not special money, so people have to make it special.

In similar fashion, creditors often try to make their loans less fungible. Through loan contracts, indenture covenants, and other legal devices they turn generalized money (which could purchase anything) into special money (which can only buy one thing). These provisions also constrain debtors to make them more likely to repay. When loans come with "strings attached," these "strings" make money less fungible. Lenders, like mothers, do not want to see fungible money diverted from its intended purpose. Although modern money is fungible, those who use money restrain, domesticate, and differentiate it so as to negate this very feature. The ongoing tension between fungibility in law and specificity in practice suggests that the development of money and credit will reach no ultimate steady state or equilibrium. Both will continue to be standardized and individualized at the same time.

A third parallel concerns trust. Both money and credit pose and resolve issues of trust. The stakes for credit are most obvious: to lend, creditors must trust that debtors will repay. The problem for creditors is always specific: will this particular debtor repay within the agreed time? Trust is not a general attitude, nor an immutable characteristic: it is al-

ways situational (Heimer and Staffen 1998, 258). But creditors rarely face this problem alone, for an elaborate system of formal institutions, professional expertise, and informal relationships has developed that provides creditors with information, simplifies the credit problem, and ameliorates creditor vulnerability. The balance between formal and informal systems varies from one context to the next. Indeed, the contrast between American and Russian credit card institutions is what makes Guseva and Rona-Tas's (2001) comparative study so interesting. Sometimes creditors depend on embedded relationships, and sometimes they use impersonal institutions. The shift from one to the other displaced and transformed trust problems but did not make them disappear.

Consider a customer who wants to buy on credit. The seller could use his personal relationship with the customer, or the customer's reputation, to decide if the customer is trustworthy enough. But suppose that the customer is a complete stranger. The seller could insist on a formal contract and consult a credit-rating agency. But recourse to formal institutions does not make the trust problem disappear. In fact, the problem has only been shifted. Instead of wondering whether to trust the debtor, the seller must decide whether to trust the law and credit-raters. And how one evaluates legal institutions and suppliers of financial information differs from how one evaluates an individual customer.

Another possibility is for the seller to insist on cash. With a COD transaction, the seller need not worry about customer creditworthiness, the reliability of the courts, or the accuracy of credit raters. Has the issue of trust disappeared? No, for now the question is whether the seller trusts money, which depends on collective, self-reinforcing beliefs about others' trust of money. Network externalities make the creation of such beliefs, and establishment of trust, a complex rhetorical and institutional process.

A final point of comparison between money and credit returns to negotiability. Money is a freely transferable claim on value. By contrast, debt claims are harder and sometimes impossible to transfer. The more negotiable and hence transferable debt is, the more it functions like money. Although this term possesses a particular legal meaning (see Holden 1955, 25), and although its evolution marks one of the more abstruse chapters in legal history, the emergence of negotiability constitutes a fundamental transformation in relations of obligation.

Consider three couples who socialize at each other's houses, trying to balance over time the number of invitations each couple extends to the others. Suppose couple A has been to couple B's house more than vice versa and so "owes" them a dinner. In addition, couple C "owes" an invitation to couple A. Two social obligations exist, from A to B, and from C to A. In American culture, these obligations are nontransferable. One cannot imagine couple A satisfying their obligation to B by giving them couple C's obligation, in other words, by arranging for C to host B. These obligations are personal and cannot be assigned to others.

In traditional common law, debts were like social obligations. As "choses in action," they were not legally transferable. The rights a creditor possessed over a particular debtor could not be given, sold, or otherwise alienated (Holden 1955, 13, 17; Johnson 1963, 20). And yet it was extremely useful to be able to satisfy obligations to one's creditors by using obligations to oneself. The incentive to transfer debts was greatest among merchants, and a kind of de facto transferability emerged first within commercial practice, then within the law merchant, and finally within the common law (Kerridge 1988, 41, 71). In England, the doctrine of negotiability was worked out and applied to financial instruments at the end of the seventeenth century (Holden 1955, 30). In the United States, further developments occurred during the nineteenth century (Banner 1998, 235–36; Horwitz 1977, 212–26), and later as states adopted a uniform Negotiable Instruments Law.

Negotiability entailed a shift away from direct, concrete relationships between specific individuals and toward abstract relationships between economic roles. With a negotiable instrument, the debtor owes whoever holds the instrument, not the person who originally loaned the money. Negotiability dislodges debts from the debtor-creditor dyads that create them, and gives them mobility. A single promissory note can satisfy multiple obligations, and as it circulates, it links transactions and traders into a network. Of course, direct relationships still matter, as Uzzi (1999) and Petersen and Rajan (1994) attest. But negotiability made credit markets more anonymous and interconnected.

A negotiable instrument acts like money except that its value depends on a particular debtor. A complex institutional apparatus can be deployed to estimate and ensure the creditworthiness of the debtor, and debts can be standardized to some extent, but the value of a particular debt eventually boils down to whether the particular debtor repays. Variably creditworthy debtors, and variable

estimates of creditworthiness, introduce heterogeneity into negotiable instruments. Thus, they do not operate like uniform, standardized money. They function like special monies, not because of the imposition of earmarkings or cultural meanings, but rather because they vary with the encumbered debtor.

Conclusion

Knowing that social factors affect money and credit is a start, but economic sociology must now determine how and why these effects occur. Sociologists can make good analytic use of cross-national and historical variations in money and credit. The experience of transitional economies, the contrast between formal and informal economies, historical evidence from both developed and developing regions, and patterns of financial innovation in developed economies all illuminate the social dynamics of money and credit.

A number of research questions seem especially fruitful. One concerns the relationship between money, credit, and inequality. Differential access to money and credit means differential ability to command resources, and hence power differences. But many forms of money and credit exist, each associated with different kinds of inequality and producing overall effects that are not yet fully understood. This results in variable and shifting patterns of inequality rather than a monolithic domination of the disadvantaged by the advantaged. And continuous financial innovation will ensure new patterns of inequality in the future.

The importance of social relationships between debtors and creditors is a robust finding. Yet sociologists have only begun to understand this result. Why do relationships matter? Do they make creditors more trusting, debtors more trustworthy, or both? Which relationships matter most, and how does their strength affect credit? And how do relationships affect the cultural framing of transactions (whether money is a gift, investment, or show of support; see Miller 1986)? It is also important to put dyadic relationships into the context of networks. Indirect and third-party ties may have important effects in credit markets.

Although informal social relationships remain important, formal financial institutions have developed enormously. An entire apparatus produces quantitative information about creditworthiness. Credit raters now operate around the globe, and can sink corporate security prices with a single rating downgrade. Credit agencies also determine whether individuals can borrow. For an industry that produces transparent information, their own activities are surprisingly opaque. Very little is known about the internal protocols and capacities of credit-raters (Stuart 2000), and we need to understand much more about the production and use of such "rationalized" information.

The relationship between formal and informal sectors seems especially complex in the case of money and credit. Sociologists have long appreciated the difference between the two, but no one has worked out the implications for credit. Most simply, formal and informal are substitutes, performing similar functions in different ways (e.g., informal credit and formal money both facilitate exchange). Or they may operate as nested constraints, in which formal arrangements set a range of possibilities within which informal factors unfold. Negotiability sanctions an entire class of legal transactions, but how people use negotiable instruments depends on other considerations. Sometimes the constraints go the other way, as when informal practices motivate change in formal procedures precisely because the two are decoupled.

Monetary innovation puts formal regulatory institutions like central banks, financial regulators, and deposit insurers into a situation of always playing catch-up. The result is not so much regulatory failure as an uneven and unstable articulation between financial markets and formal governance. The coevolution of national and international markets and institutions is well worth studying, especially given the emergence of global financial markets.

In researching money and credit, sociologists confront basic institutions of the modern economy, a major axis of power and inequality, an issue of ongoing political relevance, and a locus of meaning and signification. These topics have been a concern since the founding of sociology, but they show no signs of being exhausted.

Notes

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1. Such connotations are not universal. In contemporary Ghana people routinely acknowledge romantic relationships using money (Hart 2000, 210).

2. See also Padgett's (2001, 234–35) discussion of "translation rules."

3. Ingham outlines the politics of Britain's return to the gold standard in 1925 (Ingham 1984, 37).

4. It also institutionalized bias within the credit system. On discrimination against immigrant Jewish businesses, see Olegario 1999.

5. Debtors can also politicize credit. During the Civil War, both North and South pressured their banks to lend to the government. Such loans raised money for the state, but they also created a constituency with a financial interest in the regime's survival (Bodenhorn 2000, 231; Bensel 1990, 14, 163).

6. Simpson (1986, 141) argues that the pledging of land in England dates to the Anglo-Saxon era.

7. One form of credit used humans to collateralize loans (Lovejoy and Richardson 1999).

8. On the history of common-law debt contracts, see Baker 1979, 266–71.

9. The uniformity of terms within industries, and the variability between them, suggests that they are determined as much by social convention as by economic rationality (Fafchamps 1997; Foster 1935).

10. Similarly, social norms in rural Ireland prevented land from serving as collateral, and hence undermined rural credit cooperatives (Guinnane 1994).

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