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**STEPHEN
GUDEMAN**

TRADE'S REASON

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Max Planck Institute for Social Anthropology, P.O. Box 110351,
06017 Halle / Saale, Phone: +49 (0)345 2927-0, Fax: +49 (0)345 2927-502,
<http://www.eth.mpg.de>, e-mail: workingpaper@eth.mpg.de

Trade's Reason¹

*Stephen Gudeman*²

Abstract

Why is calculative reason so dominant in high market societies? Is it an inherent tendency that is manifested in all economies both ethnographic and historical, or is it culturally produced? If it is a cultural practice, how do we explain it? In this essay, I argue that calculative reason expands through competitive trade. It becomes prominent not through changes in beliefs and ideologies, economic scarcity, or the influence of economic theories but by the practice of impersonal exchange. Even if competitive trade is interwoven with social and personal ties, it induces calculated selection, which reverberates across other trades, cascades into the realm of mutuality, and becomes a satisfying practice itself. Taking on a life of its own, calculative reason is reified as the rational actor, although its subjective entrenchment varies by market, context and individual. As this practice expands, space for the expression of other forms of reason, other modes of allocation and ties of mutuality narrows.

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² Stephen Gudeman, Department of Anthropology, 395 HHH Center, 301 19th Ave. S., Minneapolis, MN 55455, USA. Tel.: +1 (612) 625-3890. Email: gudeman@umn.edu.

Prologue

This working paper is part of a larger manuscript, ‘The Tension in Economy’ that begins with the question, ‘Why is calculative reason (or rational choice) so dominant in high market societies?’ Is it an inherent tendency that is manifested in all economies both ethnographic and historical, or is it culturally produced? If it is a cultural practice, how do we explain it? The following essay offers my solution to the question.

But the answer here is out of context, it must be set within a view of economy that is the larger focus of the manuscript. I argue that economy consists of two value domains. I term one realm *community* or *mutuality*, and the other *market* or *trade*. The word ‘community’ refers to an association of people who share common interests or beliefs; such communities may be small territorial groups, but may also be imagined communities as in the case of a nation, religion, or global interest group. The mutual interests of a people connect them and make up part of their identity. Often, such shared interests have a material form, which I call, the ‘base’. A base can be very important, as in the case of lineage land; ephemeral, as in the case of shared knowledge within an ethnic group; or minimal, as in the case of a household’s shared stock of food. Within the mutual realm of economy, production, exchange and consumption activities may be carried forth. This domain harbors many heterogeneous, disparate and non-commensurate values, such as merit, social standing, age, gender, kinship position, equality and power that influence economic activities. In contrast, the domain of competitive, anonymous trade in markets centers on the value of efficiency, which emerges in exchange and affects practices of production and consumption. This realm of economy has become prominent in contemporary societies, and it dominates most economic discourses. The two domains of mutuality and trade are not equal and opposite, nor historically sequential; and their difference cannot be summarized as the opposition (or tradeoff) between efficiency and equity, because equity is only one of many values that people may share. The two realms are dialectically related: their difference constitutes the breach in economy.

In this essay, then, I focus on a part of the market realm, specifically the way calculative reason emerges in trade. This mode of reason has many labels, such as formal or instrumental rationality, practical reason, rational choice, and the workings of *homo economicus* or Robinson Crusoe (also known as Mr. Rational Chooser). Common to these terms is the idea of calculating the relation between means and ends by selecting the means that optimize an end or an end that minimizes use of the means available. But the use of calculated choice characterizes only one part of economy, and in other sections of the larger manuscript I am concerned to show how calculative reason is interwoven with mutual relationships, which it

affects and sometimes mystifies as if these ties were also calculated rather than something done for their own sake. A central part of the larger argument is that anonymous, competitive trade – as explained in this working paper – tends to cascade into and debase or colonize mutual relations. But context matters, for mutual ties also set the arenas for markets: the relation of the two value domains is worked out locally. This shifting relation between the dynamics of the market and sustaining mutual ties makes up economy's continuing tension.

Introduction

The use of calculative reason expands through impersonal exchange. Instrumental practices become prominent not through changes in beliefs and ideologies, economic scarcity, or the influence of economic theories but by competitive exchange. Of course, anonymous trade seldom consists solely of calculated choice: it may be interlaced with social and personal ties, and affected by emotions and cognitive limits.³ Trades may also take place under conditions of imperfect information and draw on forms of bounded rationality; for example, one party to an exchange may have greater information about market trades and values than another, which can happen in trades between high market participants and 'Third World' poor. Traders also arrive with different resources or endowments, such as withholding and monopolistic power or differential capacities in language and trading skills: in financial and commodity markets, floor traders develop styles of work, and are capacitated by their local technologies (Zaloom 2003). Calculative reason has diverse local appearances. But impersonal trade necessarily generates calculated selection, and as this practice expands, space for the expression of other forms of reason and ties of mutuality narrows.

In trade, unlike things are made quantitatively equal in a seductive and unpredictable substitution. Exchange by pricing has the remarkable power of allowing one thing to be changed into another without physical transformation. But market prices, the ratio of ends to means, are detached from relationships between people, and between them and things. They seem to have a life of their own. A trader does not control them, except when holding a monopoly. I term this seemingly independent and uncontrolled power the *fetishism* of prices.⁴ We attend to prices, talk about them, and are obsessed by their influence over our lives.

When exchange rates shift, which they do for many reasons, market participants must respond in a calculated way if they are to continue trading in the market. Their response,

³ Lane (1991) discusses the limits of the rationality assumption for economic behavior by focusing primarily on the psychology of feeling, thinking and behaving in the market.

⁴ Pietz emphasizes that a fetish brings together heterogeneous elements or "incommensurable social values" (1985: 16).

induced by shifting terms of trade, *reverberates*, or draws a reaction in other trades because it changes their payoffs; the practice *cascades*, or expands into sectors of mutuality; and it turns *reflexive* as it repeats and becomes a conscious and satisfying action itself. Induced by the practice of impersonal trade, price formation and competition, practical reason takes on a life of its own; it is *reified* or becomes an autonomous activity, although its entrenchment or subjective realization varies by market, local context and individual. Continual market participation and success lies in the repeated use of calculative reason, which constitutes the motor, the ‘spirit,’ and the ‘calling’ of high market economies. This addiction to calculative reason, or measuring ends against means, leads to endless attempts at profit making. Accumulations of wealth in money and goods signal its effective use, while its continual emergence reifies the rational actor, who constitutes the foundation for derivational models in economics.⁵

My use of the terms *fetishism* and *reification* differs from the traditional ones. Marx developed the concept of the ‘fetishism of commodities’ in the first volume of *Capital* (1967 [1867]), although the basis for his argument was laid in the *Economic and Philosophical Manuscripts* (1988) and the *Grundrisse* (1973 [1857-8]). By *fetishism* Marx referred to the special hold that things and money, or commodities, have on us in capitalism. We treat them as animate or lifelike. Marx explained that labor is always expended in production as humans produce and reproduce themselves and their means of existence. In capitalism the worker’s objectified or embodied labor is appropriated through the exchange of wage for work that precedes production. Following Aristotle, Marx distinguished the use-value of an object, such as the nourishment it provides or the warmth it offers, from its exchange-value or the number of other commodities it can fetch in trade. Use-value is principally a qualitative determination, while exchange-value refers to a quantity. Marx argued that in the market, commodities trade (more or less) in accord with the labor they embody, which is their exchange-value. Commodity trade appears to be just. The exchange of labor for a wage is different, however, for the laborer trades to the capitalist his use-value, which is his potential power or ability to labor and receives a wage, which is his exchange-value. The worker’s wage (his exchange-value) pays for the labor value of the goods that sustain him and his family so that his use-value can be reproduced and once again exchanged. Through this exchange, the laborer fairly receives the value he embodies, which is his use-value, but the capitalist obtains something different. By payment of the wage (or the exchange-value of the laborer) he secures use of the worker’s labor, and labor in action can be made to yield more value than is required to sustain

⁵ For a recent treatment of capitalism as an abstraction and ‘virtual’ economy, see Carrier and Miller (1998) and especially Carrier’s contribution (1998); our views overlap but do not coincide.

it. Through the exercise or expenditure of his use-value, the laborer both reproduces the labor value of his wage and a surplus of labor that is embodied in commodities, which the capitalist holds. The surplus falls into the capitalist's hands because he purchased and owns the worker's labor capacity or use-value, and the capitalist realizes this surplus as money profit when the commodities are sold. But this overall process, by which profits arise and are extracted in production, remains hidden because in trade all commodities – including labor – exchange at their values. The underlying reality that commodities are congealed labor is veiled in the market with the result that commodities seem to have an independent, objective and almost active life of their own. For Marx, this *animation* of commodities in exchange constitutes their fetishism: it is but the other side of the draining of labor in production. The fetishism of commodities is a symbolic representation of the human labor they embody while their real life remains hidden.

After Marx, Georg Lukács (1971 [1922]) extended the notion of fetishism and reformulated it as reification. Broadly, reification means to make something into a thing or to 'thingify' a concept that denotes a process, relationship or object. The two notions of fetishism and reification are related to what Alfred North Whitehead called "the fallacy of misplaced concreteness" in which the abstract is mistaken for the concrete (Whitehead 1925: 52). But Lukács' reformulation takes it some distance from Marx's original idea, for Marx had distinguished objectification and thingification from fetishism. For Marx, in all economies (from slavery to communism), humans objectify themselves by laboring and producing objects. Only in capitalism is this objectification systematically exploited: commodity fetishism is specific to capitalism. In contrast, Lukács equated reification with the objectification of labor, and then expanded the idea to cover all of bourgeois thought, as well as philosophical issues, and the consciousness of the proletariat who must finally "see through the reified objectivity of the given world" (Lukács 1971 [1922]: 193), if they are to liberate themselves. By this interpretation all of bourgeois civilization and culture may be seen as a reification, which may be why the subsequent Frankfurt School could never overcome its pessimistic view of society. In recent years, the use and meaning of the terms 'fetishism' and 'reification' have grown even more convoluted as anthropologists, particularly those examining native monies and transgressive objects, have adopted and employed the word 'fetishism' to designate the ambivalent and tangled relationships in which these entities are embedded.⁶

⁶ From this perspective, the many studies today that trace the social history of commodities is one way of 'de-fetishizing' them by revealing their qualitatively different contexts of production (see, for example, Appadurai 1986, Boisard 2003, Mintz 1985, and Roseberry 1996).

In contrast to Lukács I distinguish reification from fetishism; and unlike Marx and many others, I do not refer to the fetishism of commodities but argue that prices are the fetishes of the market. The construction of prices in impersonal trade brings together different qualities and transforms them to a quantitative equivalence so inscribing calculative reason as the subjectivity of traders. This reified notion expands its hold as individuals increasingly live by trade. At the extreme, as one bond trader said, “Whatever money you make is what you’re worth” (Abolafia 1996: 30), meaning that his identity was defined by the cumulative efficacy of his calculative reasoning. He priced his ‘worth,’ which was a reification of his diverse qualities.

Commensuration in Theories

Trading revolves around commensuration, which means to compare by use of a common measure.⁷ But how does commensuration arise, and from where does the measuring rod come? A degree of commensuration is found in all economies. But is making things commensurate a pragmatic act, an inherent function of the human, a product of work, or an outcome of trade?

Not everything is traded in the market and made commensurate. I distinguish three spaces of value in relation to trade and mutuality: (1) the non-commensurate, (2) the incommensurate, and (3) the commensurate. Non-commensurate things are mutual holdings that never reach the market. They are not measured against or exchangeable for other things, and usually pertain to disproportionate registers of value.⁸ Stipulating an act or item as non-commensurate keeps it within the realm of mutuality and communal management. For example, do we trade Notre Dame, the Taj Mahal or Luxor? Designating a place as a ‘world heritage site’ is an act of a global community that places an object in the non-commensurate domain, and marks its status within a specific culture as well as all cultures⁹ (designating a place as a world heritage site may have market implications, for the site may draw tourists who want to participate in its ‘community’; spending money, they support and expand local commerce that in turn may help maintain the site). Art, architecture and space are not the only components of the non-commensurate. The Islamic prohibition on collecting interest (*riba*) for a monetary loan stipulates a non-commensurable act.¹⁰ Allah prohibits gathering an

⁷ For some recent discussions of commensuration see Espel and Stevens 1998, and Povinelli 2001.

⁸ Raz (1986: 346) might term such non commensurable items “constitutive incommensurabilities.”

⁹ For an anthropological consideration of world heritage sites, see Nas 2002.

¹⁰ For an anthropological account of Islamic finance and accounting, see Maurer 2002, 2005.

effortless profit or securing an increase from a borrower who is obliged to return more than was lent. This gain cannot be part of Islamic financial markets.

Within the arena of trade lie the incommensurate things that can be brought to the bar of exchange and made commensurate. Through pricing, the incommensurate, or qualitatively different things, become commensurate. In many non-trade situations the assessment of quantity is useful, such as calculating the volume of a harvest to know how long it will last, figuring the food required to nourish a family for a week, or estimating the amount of labor needed to finish a job. Measurement scales, used for different purposes, often are locally formulated. In rural Panama, body parts – fingertips to elbow, fingertips to nose, hands outstretched across the body – were used to size a work area or measure space for building a house; different sized gourds and baskets measured harvests in maize, beans and small crops; plates and cooking pots measured the food needed each day. People create domains of comparability and devise scales to grade items for many purposes. These are registers of value. Numbers are used not only because they are ‘objective’ and distant from individual interests, which allows for trust in them (Porter 1995), but also because they are helpful in everyday life.

Applying a common measure permits comparison. A thermometer records the heat of human bodies, air and water; it can be used to compare one human body to another, to itself at different times, or to a different entity, such as a body of water. A yardstick measures linear space, and can be used to compare the length of a room with that of a pencil. A weight scale measures the mass of an object and a speedometer measures velocity: two cars can be compared by weight or speed. Similarly, different tasks can be compared by the time needed to complete them, and a genealogical tree can be used to compare kinship distance. These measures are quantitative abstractions from the diverse qualities of entities that otherwise are not similar: for example, two days with the same heat at a specific time may differ in rate of air flow, humidity, hours of daylight and duration of the heat; a human and a day that share the same temperature are otherwise different, just as speed is only one feature of a car, the earth’s rotation, and a walking person. The measuring rod keeps the category of comparison constant across a range of objects and captures one dimension of an entity’s qualities each of which may be multiply determined.

Sometimes we link different registers experimentally or intuitively. For example, a day’s heat or hours of light might be compared to the growth rate of plants or the activity level of animals. Sometimes we combine measures to make an intuitive judgment. A person’s temperature, weight, body fat, blood pressure, and cholesterol count may be used to assess her health; drawing these measures together, health workers may reach different conclusions

about her overall state, depending on their confidence in the scales, the meaning and importance they attach to them, and their experience in using them. Medical researchers, of course, may gather large samples to correlate the measures and make diagnostic predictions. But scales, whether linked by intuition or experiment, by definition are not translatable. Each scale, being a convention, covers a designated realm.

Given the many measuring rods in a society, how is commensuration established in trade? Here I depart from the two generally known approaches in economics. I do not ask what is the nature or source of the common measuring rod (as if it had a content). Thus, I do not assume that a common metric, such as energy units or labor value exists before trade and ‘makes’ items commensurate; and I do not assume that humans independently order or commensurate their separate preferences before trading. I take the more anthropological position that things are incommensurate (or non-commensurate) until we establish a relationship among them, and that market commensuration emerges in trade where we use a conventional scale to mark their relation. Market commensuration is an after the fact register.

Commensuration by labor is central in Marx’s theory of capitalism. He argued that labor is both the source and the measure of value (Meek 1973). Market prices reflect (and vary) from the labor value of commodities or the traded things and services, but ultimately, the value of every item can be reduced to the socially necessary labor time required to produce it. Consider a shirt and pair of pants made by a tailor. He spends a number of hours making them, and eventually will have an average labor time for making an outfit. From this average time of numerous tailors, the average labor time required to make a shirt and pair of pants in a society can be figured. Incorporating this required time with other forms of clothes making, the average time needed in all of tailoring and ultimately the labor time required to produce all the necessary goods and services of a society may be calculated. This sum of labor, which is required for social reproduction, represents the value of all the commodities in a society; each good or service embodies a percentage of this total value. Thus, when two commodities are traded, socially formed labor is actually being exchanged; and, Marx continued, because labor is the value creating agent in production, labor time provides the measuring rod for the trade. Market prices do diverge from labor values, but for reasons such as monopolistic pricing and super exploitation.¹¹ Regardless, the measure of labor value exists in advance of exchange; the commensuration of commodities – reached through the prior social division of

¹¹ One problem, long explored, revolves about the fact that labor values of commodities cannot be transformed to market prices, for various reasons, especially because the organic composition of capital or the ratio of labor to equipment varies across industries. An alternative approach would be to say that Marx provides a critical perspective on what ought to be rather than what is. The metric of labor time and labor value provides a moral analysis, against which actual markets can be measured. From yet a different perspective, Marx is highlighting labor productivity and how it varies with the accumulation of capital.

labor and expended labor time in production – precedes trade. Labor value provides the foundation for his model.

The neoclassical approach is different. By this argument, and there are many variations, trade reveals preferences. Each individual has preferences that are independently formed: they are exogenously determined or set outside the realm of pricing.¹² But individuals order their preferences. The order can be cardinal, ordinal or even on a meta-preference scale (Sen 1977), however the ordering must be transitive. If A is preferred to B, and B is preferred to C, then A must be preferred to C as well. If C is preferred to A, the order is not rational. In addition to being transitive, preferences are rational when they are complete (or all the options can be compared), and when they are continuous, meaning that small changes in prices lead to small changes in demand (Hausman 1992; Helgesson 2002, 2005).

Rational choice itself is sometimes distinguished from rational preference. Selection is rational when the preferences underlying it are rational (as described) and a person does not prefer any option other than the one selected (Hausman 1992; Sen 2002). Rationality has a double aspect: ordered preferences and optimal choice. Other qualifications are sometimes added. For example, rational choice is usually seen to be context independent; the preferences and choices of market actors are assumed to be independent of one another, except when they have an impact by way of pricing. (Other assumptions in this account often include that people are free of emotional behavior in their choices.)

From an anthropological perspective, two assumptions of the standard theory are questionable. First, people are presumed to arrive at the moment of trade with a ‘preference’ for rational scaling itself. The contents of the scale and the magnitude of the differences on it vary, but people order, arrange, and measure in advance of trading. According to the standard wisdom, we can be certain of this disposition through the preferences that are revealed in exchange. Scaling and measuring are not part of the act of trade; they are a prior propensity. People commensurate what they value before trading. But this assumption obviates value diversity, for it is assumed that every individual always brings his tastes to an overall, totalizing benchmark: according to the standard account, values are not disparate. This initial presumption means that people are naturally rational and so enshrines rational choice at the foundation of the model. (Of course, if people do not commensurate their tastes, they are not rational and fall outside the model.)

The standard account of preferences also elides conditions of uncertainty, which may be distinguished from risk. In situations of risk, probabilities can be attached to known outcomes. In conditions of uncertainty both the possible outcomes and their likelihoods are unknown.

¹² But see Becker (1996) who argues that preferences may be endogenously determined in the market itself.

The problem is that rational choice cannot operate in conditions of uncertainty, because outcomes cannot be fully defined.¹³ Certainly, not all our choices are made in conditions of uncertainty, but many have contingencies; their outcomes and implications are not fully predictable. Furthermore, how can we know our preferences unless we experience them? After their satisfaction, preferences also may change just as they may change in the experience of trade. Claiming that real preferences are revealed in trade simply says the trade is done; it tells nothing about them as a process, it leaves out learning-by-doing in trade and consumption, and it omits human reflexivity or action as an emergent process. As Helgesson (2002: 193) remarks about revealed preferences, “The theory’s explanatory power (...) is limited to post-event explanations.”

Commensuration in Practice

In contrast to the Marxist and neoclassical assumptions about commensuration, my view is more pragmatic: the act of trade creates the *necessity* to compare, even if we tell ourselves stories about prior preferences or embodied labor. Scaling is induced by context, which in the case of trade is a relationship with others. The scale is made in the trade.

What are the implications for the way prices are understood? Exchange rates, marked on a money scale, represent the commensuration of incommensurate things. Displaying an equivalence between different entities, and combining unlike things in a single number, prices are an abstraction through which things become alike as if a base metal could be transformed to gold, which can happen if the quantities are ‘right.’ But we are never certain of the outcome of a trade or its desirability. An exchange projects people from what they are and know to what they may be and will have. How do we know that an exchange will be right for us or even fair? Prices dance out of control but affect our sense of well-being. In market economies, we talk about prices as if they had independent efficacy, such as the shifting prices of gasoline, electricity and heating oil, or the ever-escalating prices of top managers. When prices rise while income lags, we feel impoverished; when they fall, we feel empowered. We may be told that exchange rates form a negotiated system in an overall market of supply and demand, but prices confront us individually as the power to transform our personal worlds through the interchanges they effect. Trade has a transgressive quality – dangerous, attractive, perplexing – because it alters a context by conjoining and equilibrating socially separate

¹³ To reduce uncertainty to risk, the idea of subjective probabilities is sometimes adduced: even if we do not have hard data about the likelihood of outcomes, subjective assessments of their probabilities can be attached.

things. Like alchemy, trade transforms one thing into another: two objects or services become substitutable. But are they?

Surrounded by a degree of uncertainty, every sale and purchase fills us with a degree of tension about what we are giving up for what we are gaining. However, this frisson of making things commensurate varies, and we might distinguish degrees of the shudder in exchange. At one extreme, non-commensurate items – as locally defined – occasionally are traded; and the border between non-commensurate things that cannot be traded, and items that can be exchanged shifts over time, especially as the market realm expands. Ethnographic cases graphically reveal the tensions when social identity, relationships and shared holdings are priced and sold. The Luo of Africa sometimes use inalienable lineage land to gain money, by selling it, using it to mine gold, or planting it with tobacco or cannabis. The money gained from this diversionary use of lineage land is said to be ‘bitter’. Cattle and brides obtained with this money die, because ancestral spirits pursue them (Shipton 1989). Some rural farmers in Colombia believe that illicitly baptized money has the power to multiply (Taussig 1980). Likewise, rural Panamanians report that if a godfather holds money under his godchild’s head and has it blessed instead of the baby, the money will multiply. Eventually it is lost, however, because the godfather’s sacred tie to his godchild cannot be measured, renounced and changed to money. In Bolivia, if a member of the Jukumani community sold a part of its shared land he supposedly was put to death (Godoy 1990). These exchanges exemplify attempted transactions between non-commensurate value realms, and according to the local stories, they never reach successful completion, because they violate moral borders or the disjunction between the communal and market realms.¹⁴ In reverse, many groups consider the practice of autarky to be a moral obligation that preserves community. In the Lawonda community of Indonesia, people do not sell the rice they grow and consume, nor do they buy rice from others or wish to receive it as a gift in times of need, because doing so would indicate their inability to achieve self-sufficiency by using their lineage land as well as their dependence on the work and land base of others (Vel 1994). But the line between the non-commensurate and the incommensurate may be porous and breached by the powerful. Bohannan (1955) observed that in Tiv society transfers between largely non-commensurate circuits of exchange, such as the trade of cloth or metal bars for a bride, or the exchange of subsistence goods to secure the cloth or bars, brings prestige to one man and moral failure to the other. Those who accomplish the feat of trading upwards across non-commensurate value spheres are endowed with special power: they have a ‘strong heart.’ Today, many question

¹⁴ For an example from the community realm alone, consider the world discussion when the Taliban destroyed the giant Buddha statues in Bamian.

selling body parts and sperm, paying for designer children, or renting wombs (Hewitson 2001; Radin 1996). We do advance monies, however, to uproot coal miners from their long-established communities when the underlying veins are exhausted. When non-commensurate things are exchanged – one Hollywood film features selling a wife for a night – we expand the arena of the market, or the range of the incommensurate, and find ourselves without precedents for pricing the transaction.

Even when the seam between the non-commensurate and the commensurate, or between mutuality and market, is not breached, pricing arouses tension, for trading goods or labor is a shock, a rupture, because it means making incommensurate things commensurate and substituting one for another. Of course, many trades become routine or ordinary: we buy salt as needed without too much attention given to its price. Small and regular trades arouse little tension; pens for pencils, paperclips for staples, ‘bread’ for bread are exchanges so ordinary that the frisson is not noticeable. For many of these trades, set prices provide predictability to the manufacturer and save time for the retailer, and they relieve the customer of bargaining and engaging in an antagonistic personal interchange with the seller. Finding signs at a store proclaiming, ‘no bargaining’ can be a pleasure. But buying a ‘big ticket’ item such as a home, car or household appliance is different. Their purchase leads most people to seek more information about the good, the seller and related prices (all at a cost); yet, the information does not quell the tension, because we cannot predict the impact of the trade on our welfare. We continually ask: Is it worth it? Was the purchase a good one? And we feel better when the salesperson assures us it is an excellent buy or the dress looks good, for then we feel more assured about the commensuration. Making our labor, leisure, relationships, or aspects of our environment commensurate is even more disquieting. Do people ever feel satisfied that they have been properly compensated for their work? ‘Wage grumbles’ are encountered among the grossly underpaid as well as the blatantly overpaid, such as business leaders and sports stars, who may seek higher compensation to assure themselves of an identity in a world of uncertain prices.

Experts on development may claim that when economies are modernizing or when socialism is shifting to capitalism, participants must learn how to bargain, and to price goods and services. But the change to a market economy transcends the imparting of technical skills. Consider the medieval and early modern concern with establishing a “just price” (Baldwin 1959). In part, the disquiet focused on the use of fair physical weights and measures, but underlying the discussion was the question of commensuration as people began to bring more and more goods from different places to a common bar of exchange. How should the objects

be joined?¹⁵ In rural Panama and Colombia people would talk about a just trade, but often without conclusion: did it mean exchanging a sack of maize for a sack of tubers, trading different crops by equal weights or their cost of production, or using accurate weight scales? Did it mean trading a day of work for a day of different work or did it refer to trading work in the same task? On the island of Sumba (Indonesia) people say that market thinking is new and formerly “no one calculated the value of what they gave” (Keane 2001: 72). Different goods were exchanged in equal quantity; one sack of low priced rice was exchanged for an equal volume of more expensive coffee. In Latin American marketplaces, when a transaction is completed, a seller often offers a little bit more (a *lagniappe*) as if to help bridge the incommensurate and relieve the tension. The practice is not unlike offering a baker’s dozen.

As humans increasingly submit to the mechanics of the market and learn to evaluate by price, the trade-off ratios or prices that we achieve become our indices of well-being, as quantity itself becomes a quality: a nation’s health is indicated by its productivity or its gross domestic product per capita; a company’s value is measured by its profit and growth rates, as well as the percentage of profit it distributes in dividends; a charitable organization’s effectiveness is known by its benefit/expense ratio; and individual ‘worth’ often means assets owned by a single individual, because it summarizes a person’s effectiveness in trade. Austrian and neoclassical economists emphasize that prices are a form of ‘information,’ because they convey signals about supply and demand. But we also interpret and imbue prices with deeper meanings: the better the trade-off or purchase price, the happier we are. We exalt in and are disappointed by prices, and we watch these ratios that discipline and compel us to see the world in terms of means to ends connections. Sales attract us, regardless of the good on offer, for the feeling of instrumental success they provide, although the advertisement for one brand of beer in Sweden proclaimed it must be good because it cost so much.

Veblen captured this increasing dominance of the price mentality when he distinguished between the ‘captains of industry’ and the ‘captains of finance’ (1983). The former, he argued, provide leadership in making things, refining processes, and selling products. In contrast, the captains of finance use the measuring rod of money, and they produce and trade property with an eye to the bottom line. The division, Veblen thought, was growing, with the captains of finance not only achieving supremacy in the economy but securing the honor and prestige that rightfully belongs to the captains of industry. One of the most honored and successful companies in the United States, General Electric, has long operated by the numbers: if a division does not meet its standard for return on investment, regardless of product and absolute profitability, it may be sold to achieve efficiency. Recently, Merrill

¹⁵ The concern was voiced much earlier by Aristotle in the *Ethics* (1984).

Lynch went through ‘bloodletting,’ replacing its top executives who possessed people skills and expertise in relationship banking with ‘quants’ or numbers oriented managers (New York Times, 5 January 2003).

Reification, Cascading and Debasement

Trade leads not only to the fetishism of prices but also to the reification of the rational actor. Trade takes place between people who do not share mutuality; if they do, it becomes a communal transfer. The exchange disconnects people from relationships with others and from themselves. Each market trader, from the perspective of his counterpart, is an other who is empty of communal and historical characteristics, and has no subjective qualities except the desire to trade and the ability to calculate.¹⁶ Each uses the other as a means. But in objectifying the other and suppressing a social relationship, the trader objectifies himself. Each becomes an other, for the self and the other. The asocial trade ‘thingifies’ the trader, by emptying him of social qualities and personal characteristics. His social personhood and force, his animating connections, are eliminated.

The trade of object for object, realized and abstracted in their exchange rate, replaces sociality between people with calculative reason as the subjectivity of the individual trader. A price, whether calculated in money or goods, is actually a four-part analogy: three apples for two oranges can be read as

3 : 2 :: apples : oranges,

or as

3 : apples :: 2 : oranges.

The price can be read in either direction, corresponding to the trader’s position: three apples are gained for two oranges given, or two oranges are gained for three apples submitted. For each transactor, price is the same ratio but inversely seen; and for each, price creates a means to ends relationship by comparing his return to his offer. One submits three apples to secure two oranges – the apples are his means, the oranges are his end. The other trader submits two oranges, as means, to secure three apples that are his ends. Because one trader’s offering is the end for the other, just as the other’s offering is the goal for the first, the trade comprises a

¹⁶ A neoclassical economist might claim that the subjectivity of a trader is ‘exogenous’ to the act of trading; only if *it* is traded, and priced, does it affect and is it a value in trade. Or, they might claim the trader’s subjectivity is a transaction cost that one trader levies on another, and so should or can be incorporated in the price. Conversely, if the subjectivity is calculative reason, there is no transaction cost.

threefold exchange. Each trader exchanges his means for an end, and he does so by exchanging with the other.

As ratios, prices constitute means to ends activity and instrumental reason in the person, because the trader – to be able to continue in the market, especially in conditions of competition – must act in an instrumental fashion. Because traders have no communal ties, each persuades others to trade through competitive pricing. Trade produces the ratio, and the ratio constitutes means to ends activity or practical reason. (Conversely, the non-trader, such as the self sufficient producer or the welfare recipient, may be said to lack rationality and deemed to be unworthy.)

The ratio formed through exchange has *reverberating*, *cascading*, and *reflexive* effects on other traders, the self and communities, so that calculative reason continually expands and reinforces its domain of practice. With population expansion, increased density, shifting political and environmental conditions, technological change or innovation, heightened mobility, improved transportation, or with an increase in traders and competition, rates of exchange alter. As rates change, so do the means to ends relationships of every trader. For example, for reasons of demand or the weather, the rate of three apples offered for two oranges may shift against the apple seller so that she must offer four apples for the two oranges. To continue trading, she must (1) reduce her consumption of oranges, (2) produce more apples with the same means as before, or (3) produce more enticing apples with the same means. To remain in the market, the trader must minimize her means or maximize the ends she offers. The trader must increasingly become a calculator. But as the apple seller adjusts, her new means to ends relationships affect yet other traders, through the alterations she makes, such as buying fewer consumables elsewhere, hiring more laborers, or purchasing more fertilizer. Through its reverberations across exchange rates, trade is the continuing impulse for the use of rational choice.

Trade also has a cascading effect on mutuality and communal modes of transfer. The oranges and the apples that serve as means in a trade are themselves prior ends that had to be secured or produced by earlier means. When rates of exchange shift, these ‘pretrade’ acts are affected. Reducing or enlarging the means or ends in one trade both reverberates on ‘prior’ and ‘subsequent’ ones, and cascades from ends to means to means until finally reaching into the mutual realm affecting the materials and labor that connect people in relationships. For example, if the apple seller devotes more of her own labor (by working longer hours) to produce four apples for two oranges, she must draw from efforts previously committed to sociality or to self sustenance, such as repairing her house or participating in a neighborhood group. Alternatively, she may dedicate her house garden to raising apples for sale, so

diminishing that part of her base. Ultimately, competitively determined exchange rates increasingly diminish mutuality or the shared base of community exactly as anthropological studies have shown. For example, when a cash crop, such as sugar cane, is added to subsistence farming, such as raising rice and maize for consumption, it increasingly draws on the labor and land devoted to the latter, and usually leads to the extinction of the original crops (Gudeman 1978; Gudeman and Rivera 1990). I term this cascading process from markets to community – by which the expansion of markets and calculative reason subsume mutual relations, increase commodification and draw the non-commensurate into trade – ‘debasement.’ But we might also employ Habermas’ term, “colonization” of the life-world for its resonance with the situations in which anthropologists often undertake research (Habermas 1987 [1981]: 318).

The cascading process is a general one, and its occurrence in the Third World provides a mirror from the margin of the dynamics of high market societies, because cascading occurs as well within our economy. For example, when prices rise and wages remain constant, many people work longer hours, overtime, or at two jobs; wear socks longer and darn them; keep a car for an extra year or two; sell an heirloom; downsize a house; take in boarders; or impinge on the earth’s manifold. As they do, the range of other communal action shrinks. Even when wages remain constant or rise as the economy grows, people may – as in the United States – work even more to participate in the expanding market and to display to themselves and others their effectiveness in doing so (Linder 1970). Cascading affects both female and male labor in households, resources devoted to mutuality, and expectations about tradable holdings. Sometimes the trade process may lead to strengthening mutuality through use of the wealth it generates, but the repetitive effects of calculative reason lead to its expansion with consequent communal fragmentation.

The reverberating effects of pricing are part of the cascading process that leads to a sense of uncontrollable exchange rates. Like a rushing current, prices continuously seem out of control, with no predictable channel or end point. Just as oil gushes from the ground, its price at the pump jumps this way and that, and in this flood of prices, we become calculative choosers.¹⁷

As calculative reason, repeated through reverberation and cascading, and refined by learning-by-doing, becomes habitual, it is ever more reified. When it becomes an end or something done for its own sake, calculative reason turns reflexive and the trader becomes the embodiment of rational choice. As we increasingly survey ourselves as means to trade labor,

¹⁷ My account of markets with competitive pricing thus moves away from an equilibrium view according to which prices represent moments of stasis, when supply and demand crowds meet, to seeing prices and markets as ongoing processes; to a degree, my approach represents an Austrian view of competitive markets (Boettke 1989).

ideas, ingenuity, and body parts, our singular and constant component of identity becomes the ability to fashion and calculate means to ends relations. Always searching for better means or ends, we encapsulate profit making within ourselves. This reification develops not in the Marxist sense that labor, which creates and measures value, is alienated from the worker and embodied in commodities, but because humans are drained of identity built through mutuality. The calling to trade leads to divided subjectivities, because humans are both persons – in – relations with others and individuals; they have mixed “selfways” (Markus, Mullally and Kitayama 1997), which is economy’s tension. But as we turn others and ourselves into things and as competitive trading expands – by its reverberating, cascading and reflexive effects with the rational actor serving as the processor of exchange rates – calculative practices enlarge, penetrate new realms of life, and expand the market arena.

Neoclassical economics and rational choice theory do help explicate this market reality. The first theorem of neoclassical economics is known as a Pareto optimum, which is a condition of collective rationality by which no one could achieve a better means to ends ratio through a further trade without someone else moving to a worse one. Some neoclassical economists emphasize that preferences or tastes *are* exogenous to the market actor, and so they may be. But this model also fortifies and legitimates the world of the market by turning the practices of trade into a theory of the rational actor, and then representing this market reification as the actor’s original subjectivity and mode of being.¹⁸ Ultimately, this discursive representation of the actor can be used to justify the expansion of the market arena in order to increase ‘welfare.’ Represented in the discourse of economics and reflexively in market participants, the rational calculator – that measurer of means and ends – increasingly becomes the subjectivity by which we live.

An Historical Tale

If – as I argue – calculative reason begins as a coping tool in trade, and is then reproduced in discourse as an understanding of that practice, what is the connection between the two? Let me offer a brief historical sketch of one such possible connection. I surmise that the concept of instrumental rationality itself is a pragmatic device, which spread in European discourse as a way of coping with the uncertainty produced by the expansion of market exchange. Practiced first, by bits and pieces, in material life, it was attributed to others as to the self in the market, then theorized on a philosophical basis and finally inserted into the center of the

¹⁸ Fine (1998) offers an excellent discussion of the reification of the actor in the work of Becker, but he does not suggest that reification is first produced in the market itself nor that this ‘reality’ is then reproduced in the discourse of economics.

discipline of economics. Throughout this evolution, practical ways of doing things were abstracted and voiced, and these formalizations influenced what people did in a continuing cycle.

This Western story could start with early household life, and with writings about it by Aristotle, Xenophon, and Roman authors who emphasized economizing. It might continue with the late 13th century ‘estate’ tracts from England, such as Walter of Henley who developed a system of audits and a partial theory of profit.¹⁹ Certainly, the development of double-entry accounting in Italy during the 14th century was a highly significant moment as Weber and Sombart have observed, for in double-entry accounting assets represent ends and liabilities represent means (shareholder’s equity listed as a liability are the accumulated profits). Such an historical accounting might conclude with the many rational instruments of the market that developed in subsequent centuries and that we know today, including the calculation of derivatives. But I want to make the case for the development of another, more profound sense of rationality as it is used in economics. Economics is not simply a logical discipline; rather, reason has become the grounding or commitment for market life.

The neoclassical or late nineteenth-century revolution in economics did not simply extend marginalist principles from Ricardo’s theory of land rent to all factors of production; it was not simply a use of the calculus to describe the marginal distribution of resources and the allocation of product, nor did it only signify the application of other, sophisticated forms of mathematics to material life. The revolution of the late nineteenth-century was broader, for it lay in the insertion of reason itself into the theories of the market actor who gradually emerged as an individual separated from his societal context. For example, Ricardo – writing in the early decades of the 19th century – was surely the first exponent of the use of a deductive model in economics. He attempted to provide a logical, systematic model of the economy, and he subjected his models to reasoned (though not necessarily empirical) critique. But Ricardo did not establish reason itself as the rationale for economic action, even if that was implicit in his portrayal of behavior. The decisive turning came with the late nineteenth-century neoclassical revolution, after which von Mises (1976 [1933]) and Robbins (1969 [1935]) made the centrality of instrumental reason explicit. Reason in the actor provides the certitude on which much of modern economics and market practice is based. Now, instead of ‘rationality’ referring to an attribute that an observer may use to construct a model or assign to

¹⁹ Henley, with others, used the concept of a return beyond what was needed for the next cycle on an estate. Known as the ‘*commodum*’ or ‘*verus valor*,’ it was rather like the rural Latin American household concept of the ‘remainder’ or what remains after deductions for the next cycle. Oschinsky (1971) sometimes translates the expressions as ‘profit.’

a pattern of thought, rationality is understood as an innate form of thought (or competence) which we all deploy more or less adequately in material life.

Modern notions of human or individual rationality, though owing to many sources, can be traced principally to Descartes (1596-1650). With a radical skepticism, Descartes at first brought into doubt all knowledge, all convictions, and all philosophy. But this act of doubt allowed him to find an absolute foundation for knowledge because universal doubt had to be carried out by an ego, and this self had to be excluded from such doubt. Absolute doubt, in this sense, led Descartes to the conviction that the one clear grounding for knowledge was provided by the thinking ego, which because it was above doubt could bring into doubt the experienced world. Thus Descartes, through his radical skepticism, came to the conclusion that the singular foundation for knowledge was the indubitable certainty of self; by excluding this ground for doubt from doubt itself, Descartes was able to provide a foundation for universal knowledge, judgment, and reason within the thinking being.

As Husserl (1970 [1954]) explains, this new way of knowing the world led to the modern mode of philosophizing and penetrated ever more fully into the European spirit. The divisions between mind and body as well as subject and object – dualisms that are deeply embedded in the modern discourse on economics, with its bodiless agents and passionless calculators – are built on the Cartesian presumption. The mind of economic man, external to feeling, sentiment, values, and relationships, observes them to determine and order preferences for which it selects the means most appropriate for their satisfaction. By means of the Cartesian assumption it becomes possible to postulate an ideal, rational individual who, acting outside history and society, performs rational calculations.

Husserl questioned Descartes's dualism and assertion by showing that it took for granted the Galilean-Newtonian view of the world as a separate, enclosed system of interacting physical bodies, and that the concept of the thinking ego was a result of this formulation, which disconnected objects from subjects, and nature from humans. The alleged clear and certain grounding afforded by the Cartesian mind and soul was a deduction and abstraction within the mathematical construction of nature established by the Galilean revolution.

Husserl, by placing the Cartesian revolution within the context of Galileo's ideas, draws attention to its intellectual and philosophical rooting in a world where certainties provided by God were being questioned. Recently, Toulmin (1992 [1990]) – tracing the turn to modernity and to essentialism in Western thought – provided a new account of the rise and wide acceptance of Cartesian epistemology. He argued that Descartes's relentless search for certainty was a response to the unstable political and religious conditions, epitomized by the assassination of Henry of Navarre, in which Descartes found himself. Toulmin's more

contextual argument for the rise of Cartesianism is persuasive, but he omits consideration of the rapidly changing material life of the time and the reasons for the eventual, widespread Western acceptance of the Cartesian view as a depiction of everyday life. Political situations that provide the context for Toulmin's argument have varied over time and by governmental form, but Cartesianism as an aspect of Western modernity spread widely over time and without surcease, which remains unexplained by Toulmin.

I surmise that the Cartesian revolution may be seen not only as a response to the growth of scientific thinking, to the increasing independence of philosophy from theology, or to the rapidly changing political climate but as a response to the uncertainty and increased presence of the 'other' created by the growth of markets in early modern Europe. It is far beyond my brief to trace these real-life changes in Europe during the seventeenth and eighteenth centuries – Braudel's historical work (1982) is magisterial – but I do argue that the acceptance and spread of Cartesian thinking was linked to the expansion of market life.

In this lengthy development, the interaction of practice, reflection, and written discourse involved acts of modeling and metaphoric projection. As markets expanded within nations and across their boundaries, trade more and more took place between people who spoke different languages, held different social matrices, and had incommensurate values. Material life grew increasingly dependent on unknown and unpredictable others who provided and traded the goods that met one's needs and satisfied one's growing wants. The realm of the self as defined through community diminished. The opposition between self and other, emerging from the market experience, provided the image of the knowable and the uncertain.

Project this experience of the market relation on the human, and mind becomes self, body becomes other. The first can be known with certainty, the second cannot. Then, reproject this self-image on others in the market, and one may assume that they are rational individuals also – who use one as one uses them. This image of the person, drawn from market experience, became an expectation of others in the market. In scope and detail, the construction process was Vichean: "The human mind, because of its indefinite nature, wherever it is lost in ignorance makes itself the rule of the universe in respect of everything it does not know" (Vico 1970 [1744]: 28). From this combination of market trade and the search for certainty, the rational actor was crystallized in discourse and became a shared cultural belief in the market. The concept of the rational actor is a tool and outcome of cycling from practices, to reflection, to writing, and to experience as a way of structuring unruly market transactions. Neither 'default theory' nor natural touchstone, the rational actor is the consoling tool when community seems to disappear. Market participants are socially disconnected competitors but

knowable beings, who calculate means in relation to ends, because they are rational beings in the market community.

The rationality assumption provides clear insight into the motives of others. It affords the in-sight of a Benthamite prison or Panopticon by which a single prison guard, located in the hub of a circle of cells, can observe all the inmates because the light that passes from one end of a cell to the other reveals their movements even if they are in shadow (Foucault 1979). Similarly, the market participant, able to see into the behavior of others through the assumption of calculative reason, can control their behavior ‘by getting the incentives right.’ And when the incentives are right, the market achieves clarity, that is, it clears.

The Cartesian duality and the assumption of universal calculative reason provide a way of disciplining the vagaries of the emotions and passions, and of banishing their disruptive effects in the theory of economy and to a lesser degree in practical life as a consequence of the theory that trains and disciplines ‘men of affairs’ who are confronted by the contingencies of practical life against which the theory rages. Emptied of all passions but the desire to optimize, devoid of ‘animal spirits,’ lacking in the confidence of an entrepreneur, the human is constructed and conceived as pure *homo economicus*. Love, desire, and human sociality do not matter, for they are not required in this explanation of behavior and would disrupt its predictability. As preferences, they are externalities to mind. Indeed, a market’s ‘externalities,’ a concept much employed by modern economists, are a metaphor of mind’s exterior and part of the dualism:

mind : body ::

res cogitans : res extensa ::

rationality : passions ::

economy : externality.

The adoption of Cartesian thought in market models and worked through in practice (or recommendations for it) is one way of coping with the uncertainty presented by a truly competitive market and the everyday presence of otherwise unpredictable others. Descartes, imputing rationality to the atomic individual, provided the initial charter for a culture of the market. In the trading context, each encounters the other as a means to attain something else, and this dualism provides the ground for the Cartesian hypothesis and its persuasiveness.

Two centuries and more after Descartes, his philosophy was fully realized in the discipline of economics. Beginning with Bentham’s utilitarianism – his ‘felicity calculus’ or account book image of the human – in the late 18th century, continuing with the deductive models of Ricardo in the second decade of the 19th century, and culminating with the rise of marginalist

economics toward the end of the nineteenth century, models in economics witnessed a radical transformation. The nineteenth-century neoclassical revolution represents the full and final realization of Cartesian economics. According to the modelers, the economy is made up of bodiless and timeless minds – without substance, affect, life, or death – that calculate similarly. This commensurability of minds underpins the havoc of free exchange: environments, resource endowments, and personal preferences may differ, but as Cartesian egos, as reasoning selves (without matter or extension), humans are the same. And this commensurability promises rationality in the economy, especially if the participants themselves come to share the view of the modelers.

As a part of market activity, the rational actor model permits the formation of stable expectations, converting what otherwise might be unpredictability in others to measurable probability on which calculations can be made. On this assumption that the market is a realm of calculable risk (as opposed to uncertainty), the regnant values of efficiency and optimality must stand.

The search for certainty, that starts perhaps with Aristotle's model of community economy and continues – with the rise of markets – through the mercantilists, the physiocrats, Ricardo and Marx, culminates with the assumption of means-ends, calculative, Cartesian reasoning, though at a cost, such as excluding ties of mutuality, encountering disturbing paradoxes like the Prisoner's Dilemma, and inscribing a gendered dualism (Jaggar 1983).²⁰ This modernist assumption that the market realm is invested with rational action is a cultural model, yet it describes a de-cultured individual who requires local endowment with cultural resources, preferences, and wants even while standing outside these particularities. Instrument of last resort when community seems to disappear, the universal model of the rational actor asserts the presence of a timeless human core while denying its local fabrication by humans.

²⁰ The Cartesian division between subject and object, mind and body, inner and outer, discipline and passion has provided one way of constructing Western patriarchy by linking mind and discipline to those who participate in the market. Passions and the body as inferior and uncertain sources of knowledge must be brought under control of the rational market ego who usually is a male. Rigged to the market, the Cartesian duality of mind and body often has been projected on gender to produce and justify an asymmetric power relation between male and female.

REFERENCES

- Abolafia, Mitchel Y. 1996. *Making Markets: Opportunism and Restraint on Wall Street*. Cambridge: Harvard University Press.
- Appadurai, Arjun. 1986. Introduction: commodities and the politics of value. In: *The Social Life of Things*. Arjun Appadurai (ed.), pp. 3-63. Cambridge: Cambridge University Press.
- Aristotle. 1984. *The Complete Works of Aristotle*. Jonathan Barnes (ed.). Princeton: Princeton University Press.
- Baldwin, John W. 1959. The Medieval Theories of the Just Price. *Transactions of the American Philosophical Society* vol. 49.
- Becker, Gary S. 1996. *Accounting for Tastes*. Cambridge: Harvard University Press.
- Boettke, Peter J. 1989. Evolution and Economics: Austrians as Institutionalists. *Research in the History of Economic Thought and Methodology* 6: 73-89.
- Bohannon, Paul. 1955. Some Principles of Exchange and Investment among the Tiv. *American Anthropologist* 57: 60-70.
- Boisard, Pierre. 2003. *Camembert: A National Myth*. Richard Miller (trans.). Berkeley: University of California Press.
- Braudel, Fernand. 1982. *The Wheels of Commerce*. Siân Reynolds (trans.). New York: Harper and Row.
- Carrier, James G. 1998b. Abstraction in Western Economic Practice. *Virtualism: A New Political Economy*. James G. Carrier and Daniel Miller (ed.), pp. 25-47. Oxford: Berg.
- Carrier, James G., and Daniel Miller. 1998. *Virtualism: A New Political Economy*. Oxford: Berg.
- Espel, Wendy Nelson, and Mitchell L. Stevens. 1998. Commensuration as a Social Process. *Annual Reviews of Sociology* 24: 313-343.
- Fine, Ben. 1998. The Triumph of Economics; Or, 'Rationality' Can Be Dangerous to Your Reasoning. *Virtualism: A New Political Economy*. James G. Carrier and Daniel Miller (ed.), pp. 49-73. Oxford: Berg.
- Foucault, Michel. 1979. *Discipline and Punish*. Alan Sheridan (trans.). New York: Random House.
- Godoy, Ricardo. 1990. *Mining and Agriculture in Highland Bolivia*. Tucson: University of Arizona Press.
- Gudeman, Stephen. 1978. *The Demise of a Rural Economy*. London: Routledge
- Gudeman, Stephen, and Alberto Rivera. 1990. *Conversations in Colombia*. Cambridge: Cambridge University Press.
- Habermas, Jürgen. 1987 [1981]. *The Theory of Communicative Action, II*. Cambridge: Polity Press.
- Hausman, Daniel M. 1992. *The Inexact and Separate Science of Economics*. Cambridge: Cambridge University Press.
- Helgesson, Gert. 2002. *Values, Norms and Ideology in Mainstream Economics*. Uppsala: University Printers.

- Helgesson, Gert. 2005. Rationality in Economy: An Interdisciplinary Dispute. In: *Peopled Economies: Conversations with Stephen Gudeman*. Staffan Löfving (ed.), pp. 29-62. Uppsala: Interface.
- Hewitson, Gillian. 2001. The Disavowal of the Sexed Body in Neoclassical Economics. *Postmodernism, Economics and Knowledge*. Stephen Cullenberg, Jack Amariglio and David F. Ruccio (eds.), pp. 221-245. London: Routledge.
- Husserl, Edmund. 1970 [1954]. *The Crisis of European Sciences and Transcendental Phenomenology*. David Carr (trans.). Evanston: Northwestern University Press.
- Jaggar, Alison M. 1983. *Feminist Politics and Human Nature*. Totowa: Rowman & Allanheld.
- Keane, Webb. 2001. Money is No Object. *The Empire of Things: Regimes of Value and Material Culture*. Fred R. Myers (ed.), pp. 65-90. Santa Fe: School of American Research Press.
- Lane, Robert E. 1991. *The Market Experience*. Cambridge: Cambridge University Press.
- Linder, Steffan. 1970. *The Harried Leisure Class*. New York: Columbia University Press.
- Lukács, Georg. 1971 [1922]. *History and Class Consciousness*. London: Merlin Press.
- Markus, Hazel, Mullally, Patricia, and Kitayama, Shinobu. 1997. Selfways: Diversity in Modes of Cultural Participation. *The Conceptual Self in Context*. Ulric Neisser and David Jopling (eds.), pp. 13-61. New York: Cambridge.
- Marx, Karl. 1995 [1865]. *The Poverty of Philosophy*. New York: Prometheus Books.
- Marx, Karl. 1988. *Economic and Philosophic Manuscripts of 1844*. New York: Prometheus Books.
- Marx, Karl. 1973 [1857-8]. *Grundrisse*. New York: Vintage Books.
- Marx, Karl. 1967 [1867]. *Capital* (vol. 1). New York: International Publishers.
- Maurer, Bill. 2002. Anthropological and Accounting Knowledge in Islamic Banking and Finance: Rethinking Critical Accounts. *Journal of the Royal Anthropological Institute* (N.S.) 8, 645-667.
- Maurer, Bill. 2005. *Mutual Life, Limited*. Princeton: Princeton University Press.
- Meek, Ronald L. 1973. *Studies in the Labour Theory of Value*. London: Lawrence and Wishart.
- Mintz, Sidney W. 1985. *Sweetness and Power*. New York: Viking Penguin.
- Nas, Peter J.M. 2002. Masterpieces of Oral and Intangible Culture. *Current Anthropology* Vol. 43 (1): 139-148.
- Oschinsky, Dorothea. 1971. *Walter of Henley*. Clarendon Press: Oxford.
- Raz, Joseph. 1986. *The Morality of Freedom*. Oxford: Clarendon Press.
- Pietz, William. 1985. The Problem of the Fetish. I. *Res* 9: 5-17.
- Porter, Theodore M. 1995. *Trust in Numbers*. Princeton: Princeton University Press.
- Povinelli, E. A. 2001. Radical Worlds: the anthropology of Incommensurability and Inconceivability. *Annual Reviews of Anthropology* 30: 319-334.
- Radin, Margaret Jane. 1996. *Contested Commodities*. Cambridge: Harvard University Press.
- Robbins, Lionel. 1969 [1935]. *An Essay on the Nature and Significance of Economic Science*. 2nd ed. London: Macmillan.

- Roseberry, William. 1996. The Rise of Yuppie Coffees and the Reimagination of Class in the United States. *American Anthropologist* 98: 762-775.
- Sen, Amartya K. 1977. Rational Fools: a critique of the behavioral foundations of economic theory. *Philosophy and Public Affairs* Vol. 6(4): 317-344.
- Sen, Amartya. 2002. *Rationality and Freedom*. Cambridge: Harvard University Press.
- Shipton, Parker. 1989. Bitter Money: cultural economy and some African meanings of forbidden commodities. *American Ethnological Society Monograph Series* No. 1. Washington, D.C.: American Anthropological Association.
- Taussig, Michael. 1980. *The Devil and Commodity Fetishism in South America*. Chapel Hill: University of North Carolina Press.
- Toulmin, Stephen. 1992 [1990]. *Cosmopolis*. Chicago: University of Chicago Press.
- Veblen, Thorstein. 1983 [1921]. *The Engineers and the Price System*. New Brunswick: Transaction Books.
- Vel, Jacqueline. 1994. *The Uma-Economy*. Wageningen University.
- Vico, Giambattista. 1970 [1744]. *The New Science of Giambattista Vico*. Thomas Goddard Bergin and Max Harold Fisch (trans.). Ithaca: Cornell University Press.
- Von Mises, Ludwig. 1976 [1933]. *Epistemological Problems of Economics*. George Reisman (trans.). New York: New York University Press.
- Whitehead, Alfred North. 1925. *Science and the Modern World*. New York: Macmillan Co.
- Zaloom, Caitlin. 2003. Ambiguous Numbers: trading technologies and interpretation in financial markets. *American Ethnologist* 30(2): 258-272.