The Virtues of Free Markets

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Free markets have many virtues. Arguably, the most recognized is the expansion of individual choice—and thus freedom—through mutually beneficial exchange (see Bauer's definition of economic development in Dorn 2002: 356). This proposition is at the heart of the enduring impact of Adam Smith's *Wealth of Nations* ([1776] 1937) which aptly spells out the benefits of the Invisible Hand for citizens and societies.

In *Capitalism and Freedom* (1962), Milton Friedman articulates why the economic freedom at the heart of free markets is also a precondition for political freedom. Freedom of expression is not possible when the means of production are under government control and individuals lack the economic means to sustain themselves and their points of view.

This article argues that free markets promote other important virtues that have heretofore received scant attention. Specifically, through fostering an indefinitely-lived series of exchanges, free markets create a future promoting integrity and trust. This is because the more the future matters, the better behaved are individuals in the present. Therefore, rather than being castigated, as they so often are in the popular media and political arena, for encouraging immorality, free markets should be praised for fostering integrity

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and cooperative behavior through their promotion of ongoing mutually beneficial exchange.

The two sections that follow provide a positive definition of integrity and show how it differs from the normative concepts of morality, ethics, and legality. They also explain the fundamental reason free markets foster integrity. The rationale is demonstrated through a simple but powerful game-theoretic construct: the prisoner's dilemma. Through the prisoner's dilemma, we can see why repeated interaction between individuals promotes integrity as well as other forms of cooperative behavior.

While all economic systems feature some repeat interaction, well-defined and enforced rights to private property increase opportunities for repeat interaction. Relative to other forms of organizing economic activity, therefore, free markets are superior at promoting integrity and other cooperative virtues as well as prosperity.

Empirical observations from a variety of settings supporting this article's proposition concerning the positive relationship between free markets and integrity are provided. The evidence demonstrates the link between the importance of the future and the practice of integrity in the present. Such a link also promotes cooperative behavior in general and thereby certain normative virtues from the spheres of morality, ethics, and legality. The evidence indicates why so much of how free markets are commonly conceived, in the popular media and elsewhere, needs to be recast. The reasons why free markets are so often misunderstood when it comes to the promotion of positive and normative virtues are explored.

There is, of course, a potential Achilles' heel in the argument about the beneficial effects of repeated interaction. This prospective flaw revolves around the fact that the repeat interaction typically involves a different and ever-broadening set of players. The means by which markets address this matter are discussed.

A Positive Definition of Integrity

Social scientists typically relegate integrity to the domain of normative analysis. Akin to concepts such as morality, ethics, and legality, integrity has been assumed to involve a nonscientific value judgment that cannot be proved right or wrong by facts, evidence, or logic. Rather, such assessments are taken to stem from the value system of the person making the judgment. Normative analysis contrasts with positive analysis, which is capable of providing a scientific, objective assessment (quantitative and/or qualitative) of the outcomes associated with any given action.

Yet, as Erhard, Jensen, and Zaffron (2010) show, it is possible to bring the concept of integrity into the sphere of positive analysis. They do so by arguing that integrity is "not about good or bad, or right or wrong, or what should or should not be." Rather, integrity boils down to honoring one's word, which implies that "you either keep your word, or as soon as you know that you will not, you say that you will not be keeping your word to those who were counting on your word and clean up any mess you caused by not keeping your word" (Erhard, Jensen, and Zaffron 2010: 2–3).

Erhard, Jensen, and Zaffron (2010: 2) go on to assert that integrity, as a state of being whole and complete, is a necessary condition for workability and that "the resultant level of workability determines for an individual, group, or organization the available opportunity set for performance." By improving workability, integrity enhances individual, group, or organizational performance, however performance is defined.[1]

Erhard, Jensen, and Zaffron (2010) contrast integrity with the concepts of morality, ethics, and legality that exist in the normative realm of virtues. Those related concepts reflect evolved norms of behavior in a particular group, society, and state.

Given our positive definition of integrity, the following section shows why free markets, relative to other means of organizing economic activity, more fully promote the practice of integrity as well as other cooperative virtues. Fundamentally, the reasons stem from the repeated nature of voluntary exchange and private property rights at the core of free markets.

[1]Integrity, as defined here in a positive sense, can be used by individuals and groups for good or for evil from a normative perspective. For example, think about members of the Mafia or the Nazi party behaving with integrity in their narrow interactions with each other. That said, there is likely to be a positive correlation between the objectives to which individuals and groups broadly apply their integrity and other cooperative virtues from the normative sphere. This is because objectives based on trampling on others' rights and liberties diminish a given economy's productivity and ultimately the potential gains to be realized by individual members of that economy.

Why Repeat Interaction and Private Property Rights Promote Integrity and Other Forms of Cooperative Behavior

Why do individuals honor their word? In certain cases, there are adverse legal consequences associated with breaking one's promises, penalties that serve to mitigate any temptation to go back on one's word. Macauley (1963), however, reports that businesspeople often fail to plan exchange relationships completely and rarely rely on legal sanctions to adjust these relationships or to adjudicate disputes. One large manufacturer, for example, audited its records and found that 60–75 percent of the time in any given year it had failed to create legally binding contracts that set forth relevant terms and conditions with customers. Macauley finds a similar pattern across a wide variety of business dealings. His findings beg the question of how businesses can operate effectively with so little reliance on contractual details and legal sanctions.

In answering the core question, Macauley points to established norms honoring informal contracts. In addition, Macauley notes the overarching presence of a non-legal sanction. In particular, most exchanges are not one-shot affairs and instead hold the promise of repetition. The prospect of repeat business incentivizes parties to behave cooperatively consistent with the informal terms of the agreement (Telser 1980).

Niskanen (1991: 236–37) provides a telling observation from his days as the chief economist of the Ford Motor Company:

> I was surprised to learn that Ford made billions of dollars of purchases a year through regular suppliers over the telephone with only the skeleton of a contract and with few contract disputes. The mutual desire for continued relations was what enforced the performance of both parties in each transaction. At any time that either party expected to end the relation or expected the other party to end the relation, moreover, the primary remaining discipline on the immediate transaction was the value of the firm's reputation with other parties, not the protection of a formal contract. Only when Ford made a major purchase without the expectation of a future relation was the contract extensive and often disputed.

To more formally see the difference that the possibility of future dealings makes in determining present behavior, consider the game-theoretic construct of the prisoner's dilemma. In its one-shot or single-play form, the prisoner's dilemma explains why individuals are incentivized to renege on their formal agreements and/or tacit understandings with other participants—thereby lowering the collective well-being of all involved.

If the prisoner's dilemma game is played only once, each player's dominant strategy is to cheat or defect: the equivalent of going back on one's word in Erhard, Jensen, and Zaffron's (2010) parlance. That is, no matter the strategy other participants select, it is always better for any player to forsake actions promoting the greater workability and well-being of a group and its members.

Among other things, the prisoner's dilemma has been used to explain why cartels break down, public goods are undersupplied, medical costs burgeon under a system of third-party payment, litigiousness rises when judicial systems tap "deep pockets," and representative democracies run fiscal deficits (Browning and Zupan 2008). The one-shot version of the prisoner's dilemma thus illustrates that there are settings in which the pursuit of self-interest leads to suboptimal outcomes, in contrast to Adam Smith's insight regarding the socially beneficial workings of the Invisible Hand.

With repeated play of the prisoner's dilemma, however, there is a future. A future gives participating players a dimension with which to enforce agreements by punishing one another in out periods for any cheating in the present period. This critical dimension has been shown to elicit more cooperative outcomes.[2] Indeed, Axelrod (1984) shows that in an indefinitely-repeated prisoner's dilemma setting, the equilibrium that emerges is directly opposite to the one predicted by a one-shot framework. Behaving collaboratively until one's partner transgresses from such a strategy and then retaliating in kind (the "Tit-for-Tat" or Old Testament "Eye-for-Eye" approach) consistently

[2]This outcome holds so long as the game is indefinitely lived (Selten 1978). If play is repeated a finite number of times, the final period reverts to a one-shot setting and its associated predicted outcome of non-cooperative behavior. Knowing what the outcome will be in the final period, players are incentivized to behave non-cooperatively in the penultimate period, and so on, by backwards induction. Thus, when players know that, at a certain point, there will be no future, the beneficial impact of repeat interaction unravels and we revert back to the non-cooperative outcome predicted by a one-period prisoner's dilemma model.

outperforms any other strategy put forth in round-robin simulations. Repeated play in essence fosters integrity by creating a benefit that flows, through the dimension of the future, to the practice of honoring one's word in the present.[3]

Axelrod demonstrates how repeat interaction fosters cooperative behavior by conducting tournaments in which participants submit strategies for playing an indefinitely-lived prisoner's dilemma game. Each strategy is paired, round-robin style, with every other strategy during the tournament. The consistent winner is the simplest strategy submitted, "Tit-for-Tat" or "Eye-for-Eye."

Tit-for-Tat continues to win Axelrod's tournaments even when participants know that it has prevailed in prior years and attempt to design sophisticated strategies to outfox it. For example, some craftier strategies cheat occasionally in the playing of the prisoner's dilemma game and thereby slightly outperform Tit-for-Tat in head-to-head competition.

Craftier competitors fail to convert head-to-head wins against the cooperative Tit-for-Tat strategy into an overall victory due to the tournament's round-robin nature. This is because craftier programs also end up being paired with other less cooperative strategies over the tournament's course. The damage inflicted on each other in such rounds more than compensates for gains secured when playing, and cheating, against more cooperative programs. The results provide compelling evidence that cooperative behavior emerges, from an evolutionary biology perspective, through repeat interaction.

The Importance of Private Property Rights

Of course, some form of markets and repeat exchange exists in all economic systems. Olson (2000: 177) notes that even in the former Soviet Union, trades between managers of state-owned enterprises in a centrally planned economy became so frequent that "the Russian word *tolkach,* for pusher or expediter, was commonly used to refer to the person sent out to barter for scarce inputs and intermediate goods."

[3]Framing, of course, matters (Levitt and List 2007). When interactions are described as "Wall Street" versus "Public Goods" games, participants display less cooperative behavior.

A free-market system, however, with its reliance on private property rights, provides the broadest possible opportunities for repeat exchange (Alchian 1965, Alchian and Demsetz 1973). The wider opportunities for repeat exchange across time, products, places, and individuals made possible by clearly defined and enforced private property rights give free-market systems a vital edge in both generating prosperity and promoting integrity and other cooperative virtues.

Niskanen (1991) notes that private property rights are part of an economy's all-important "soft infrastructure." To be fully effective, they need to be well-defined, marketable, capable of being partitioned, and as universally specified as possible. They also require commercial codes and courts for enforcement and dispute resolution.

When functioning effectively, private property rights dramatically expand the opportunities for repeat exchange. Think about all the capital-intensive types of production necessitating investment in assets such as machinery, factories, and offices. If entrepreneurs contemplating such capital investments fear that their assets will be appropriated, the incentive to invest is diminished as are the associated opportunities for broader exchange across time, products, places, and individuals (Olson 2000). Similarly, when investments are long-lived, risky, and sizable, the possibility of securing funding increases if mortgage agreements can be written, insurance obtained, and limited liability entities formed. Such contracts, hedging instruments, and organizational forms facilitate a lasting and widely used capital market. As Olson (2000: 185) notes, they permit more efficient production of complex goods requiring "the cooperation of many people over an extended period of time." Moreover, "without the right institutional environment, a country will be restricted to trades that are self-enforcing."

Supporting Evidence

Beyond the information already presented, what evidence do we have that repeat interaction, especially through free markets, fosters integrity and cooperative behavior? Reflection reveals a plethora from a wide range of settings.

Consider Adam Smith, who first articulated how free markets promote economic liberty and prosperity. Although not commonly realized, Smith also pointed out how markets promote virtues such as integrity, punctuality, and propriety (behaving well towards others, seeing their views, and so on). For example, in *Lectures on Jurisprudence* ([1762–1763, 1766] 1982: 588),[4] Smith argues:

> Whenever commerce is introduced into any country, probity and punctuality always accompany it. These virtues in a rude and barbarous country are almost unknown. Of all the nations in Europe, the Dutch, the most commercial, are the most faithfull to their word. The English are more so than the Scotch, but much inferiour to the Dutch, and in the remote parts of this country they [are] far less so than in the commercial parts of it, as some pretend. This is not at all to be imputed to national character, as some pretend. There is no natural reason why an Englishman or a Scotchman should not be as punctual at performing agreements as a Dutchman. It is far more reduceable to self interest, that principle which regulates the actions of every man, and which leads men to act in a certain manner from views of advantage, and is as deeply implanted in an Englishman as in a Dutchman. A dealer is afraid of losing his character, and is scrupulous in observing every engagement.

In keeping with the prisoner's dilemma analysis, Smith ([1762–63, 1766] 1982: 588) notes that integrity (probity in his words) increases with the frequency of exchange:

> When a person makes perhaps 20 contracts in a day, he cannot gain so much by endeavouring to impose upon his neighbours, as the appearance of a cheat would make him lose. Where people seldom deal with one another, we find that they are somewhat disposed to cheat, because they can gain more by a smart trick than they can lose by the injury that it does to their character. They whom we call politicians are not the most remarkable men in the world for probity and punctuality. Ambassadors from different nations are still less so: they are praised for any little advantage that they can take,

[4]Adam Smith planned to write a trilogy: *The Wealth of Nations, The Theory of Moral Sentiments,* and *The Theory of Jurisprudence*. He died before the last of these three books was written and his will (which was followed) called for his unpublished writings to be burned. *Lectures on Jurisprudence* is based on the notes taken by students from Smith's talks that were to form the basis for his third book.

> and pique themselves a good deal on this degree of refinement. The reason for this is that nations treat with one another not above twice or thrice in a century, and they may gain more by one piece of fraud than [lose] by having a bad character. France has had this character with us ever since the reign of Louis the XIVth, yet it has never in the least hurt either its interest or splendor.

Consistent with Adam Smith, Ridley (2010) attributes humanity's progress to market-based exchange and the potential that it creates for specialization. Beyond promoting prosperity, Ridley articulates how free markets, through repeat exchange, advance integrity and other forms of cooperative behavior. From noting the steady decline in European per capita homicide rates since 1300 to exploring why trust makes markets work and how markets generate trust, Ridley shows that free markets fundamentally civilize, not coarsen.[5]

Like Smith and Ridley, McCloskey (2006) provides historical examples of how free markets promote virtues such as integrity and cooperativeness. The evidence includes the frequency with which the plots written by Shakespeare and his contemporaries feature betrayal, lying, dissembling, and disguising versus the works of more modern playwrights such as Ibsen and O'Neill.

Twelfth through fourteenth century Italy provides a picture of lesser fidelity between exchange partners and supposed friends similar to that of Elizabethan England. McCloskey (2006: 157) notes advice given to aspiring merchants by Certaldo in his *Book of Good Practices,* written around 1360: "Test [a purported friend], not once but a hundred times"; and "He who trusts not will not be deceived." A contemporaneous Florentine businessman and moralist similarly advises beginning merchants (McCloskey 2006: 157): "Above all, if you wish to have friends or relationships, make sure that you don't need them. . . . Cash. . .[is] the best friend or relative that you can have."

In his award-winning *The Invisible Hand of Peace*, McDonald (2009) undertakes a painstaking empirical analysis of hundreds of conflicts between nations over the past two centuries. He finds that the propensity of nations to promote free markets when it comes to matters of international trade is positively correlated with

[5]See, for example, Ridley (2010: 98–99, 103) for contemporary and historical examples of how markets generate trust.

a reluctance to resort to war. Furthermore, a laissez-faire attitude with regards to international trade is a better predictor of peace than democracy. MacDonald argues that this is because democracies still can be associated with systems of poorly defined private property rights that lead to greater zero-sum redistribution and unproductive rent-seeking. Waging war against other nations is but an extension of such a zero-sum mentality.

In contrast to McCloskey's (2006) historical examples of more common feckless behavior, the economics literature documents how markets nowadays ensure merchants' integrity through the prospect of future sales. Brickley, Smith, and Zimmerman (2002) note that the mechanisms include more rapid and widespread distribution of information about misbehavior in cases where there are frequent repeat transactions between the same parties. Brickley, Smith, and Zimmerman (2002: 1830) point to the New York diamond market, where cheating seldom occurs because "this market is dominated by a close-knit community of Hasidic Jews; thus, information about unethical behavior is rapidly distributed throughout the market." The mechanisms relied upon in broader market settings where exchanges involve an ever-changing array of partners are more fully discussed in the penultimate section of this article.

Beyond more traditional settings, Anderson (2004) has examined markets and the extent to which they are stewards of natural resources and the environment. Contrary to popular perception, Anderson (2004: 91) argues that markets and the environment are more friends than foes and that: "If we wish to continue to improve the environment, ultimately we are going to have to turn the environment into an asset; make it something that people, who are the stewards, are rewarded for producing."

Anderson makes two points with regard to free-market environmentalism. First, there is an income effect associated with the wealth created by free markets. The estimated correlation between income and environmental quality is positive and, for many environmental measures, the turning point is between a GDP of $4,000 and $8,000 per capita. Anderson (2004: 86) relays the quip "wealthier is healthier."

Second, incentives matter and when property rights are well-defined, markets effectively conserve natural resources (Coase 1960) while providing a peaceful means of adjudicating between competing uses for those resources. Consider the case of the buffalo, which was fiercely battled over and nearly became extinct in the United States when it was publicly owned but now is making a comeback through private ownership. The cow, pig, and chicken suffered no such near-extinction because these species were consistently in the hands of private owners.

Anderson (2004) provides a series of examples involving timber, wildlife, air, and water, to show how well-defined property rights and free markets are superior at conserving natural resources and peacefully allocating their distribution across potential competing uses. In the case of the "wolf wars" ensuing from the reintroduction of timber wolves into Yellowstone during the Clinton administration, acrimony reigned between ranchers/hunters and environmentalist national park managers. The former perceived the costs of the new wolves to outweigh the benefits due to damage to livestock and predation by wolves on big game animals. The latter perceived the benefits to outweigh the costs because the wolves drew more visitors to Yellowstone.

Free-market environmentalism diffused the contention created by political environmentalism when entrepreneurial pragmatists in the environmental movement, led by Defenders of Wildlife, developed an insurance-like approach to protect both wolves and ranchers/hunters. Through a privately funded compensation fund, Defenders of Wildlife began paying ranchers for livestock losses due to wolf predation.

Voluntary philanthropy is another form of cooperative behavior fostered by free markets. Much like in the case of environmentalism, there is a wealth effect. That is, the prosperity created by free markets fosters a larger bounty from which to finance philanthropy. No country gives more than the United States. Charitable gifts totaled $304 billion in 2009—2.2 percent of GDP.[6]

While part of private individuals' giving reflects lower taxes to fund government social-welfare programs, it is still striking the extent to which Americans are more inclined to give voluntarily at least some of their time and money than other nations' citizens. According to a Johns Hopkins University survey (Greenfeld

[6]Of course, the extent to which economic prosperity can be driven by philanthropic, unilateral caring in which *one* person does what another person wants, versus bilateral exchange, where *each* person does what the other person wants, is an empirical question. In keeping with Adam Smith, Niskanen (2009) argues for the relative effectiveness of the bilateral caring implicit in consensual, market-based exchange.

et al: 2000), 49 percent of Americans volunteer their time for civic activities during any given year versus 13 percent of Germans and 19 percent of French. In addition, 73 percent of Americans give money charitably versus 43 percent of French and 44 percent of Germans. Such civic-mindedness has long characterized America's market-oriented society. Indeed, it was one of the key observations gleaned by Tocqueville ([1835] 2000) from his travels in our country in the 1820s and 1830s.

The Misconception of Markets as Coarsening

Notwithstanding the foregoing evidence, why do free markets tend to get such a bad rap, at least in the popular media and political arena? Three factors are at work: the belief that a system based on self-interest is not moral and thus cannot serve society's welfare; the idea that free markets promote inequality; and the need to find a scapegoat for ills of the human condition. Let me address each of these in turn and show why they miscast free markets and thereby miss their civilizing role.

Markets, Morality, and the Promotion of Social Well-Being

Can markets be moral and promote social well-being? Clark and Lee (2011) note that most people see a self-interest-based system as inconsistent with "magnanimous morality," which involves helping intentionally, doing so at a personal cost, and assisting identifiable beneficiaries. Instead, markets promote "mundane morality" consisting of "obeying the generally accepted rules or norms of conduct such as telling the truth, honoring your promises and contractual obligations, respecting the property rights of others, and refraining from intentionally harming others" (Clark and Lee 2011: 6).

Clark and Lee argue that the Invisible Hand rationale for markets, first articulated by Adam Smith ([1776] 1937), and the manner in which it ignores a role for magnanimous morality compounds the normative challenge for free markets. The Invisible Hand promotes social well-being spontaneously without any conscious central planning, and not because participating buyers and seller intend to advance it. Rather, buyers and sellers are motivated by self-interest and generally profit along the way. Furthermore, other than the buyers and sellers pursuing their narrow self-interests through voluntary exchange, there is no intended beneficiary.

While magnanimous morality may be the product of evolutionary imprinting (Rubin 2003) and commonly viewed as an imperative, Clark and Lee (2011) provide two reasons it can never be the basis for widespread cooperation and prosperity. First, the sheer number of individuals we can meaningfully care about is quite small compared to the number that must be cooperated with in a productive economic system (see also Niskanen 2009). Second, we have yet to discover a more effective means than markets and prices to provide relevant information and incentives to the multitude of consumers and producers that are involved in any economic system of note (Hayek 1945).

Furthermore, although markets may promote mundane morality, it is ultimately relative performance that counts. Much as Winston Churchill (1947) observed about democracy being "the worst form of government except all those other forms that have been tried," so too do free markets have flaws, until compared to other means of organizing economic activity.

Clark and Lee (2011) point to two further positive effects of markets' mundane morality: the promotion of social harmony and human liberty. For example, while increasing concern for others is often recommended as a way to achieve social harmony, it can have the opposite effect. This is because systems based on personal caring bring to the fore differences in religion, ethnicity, nationality, and other factors that divide rather than unite individuals. Systems based on personal caring that promote egalitarianism, such as socialism, risk rupturing the social fabric and human relationships. This stems from the envy and resentments egalitarianism fosters given that humans are inherently diverse in their preferences, abilities, objectives, industriousness, and values (Murray 1989, 1991). By contrast, impersonal, market-based systems minimize dependence on caring or threat (Niskanen 2009: 563) thus creating "situational contexts in which cooperation and peace are reinforced over and over again."

Impersonal market exchanges also have the moral benefit of promoting individuals' freedom of choice and expanding their options, so long as others' equal rights are respected (a Bauer theme as noted by Dorn 2002). A key aspect of this freedom of choice involves which groups to affiliate with (Murray 1991). Such affiliations based on individual choices and accountability form the "glue" holding communities together.

In contrast, Marxist socialism, emphasizing "from each according to his abilities, to each according to his needs" atomizes individuals rather than drawing them together. As noted by Murray (1991: 246), while the Marxist ideal calls on individuals to be saints, it ends up seducing "virtuous people into behaving greedily." Think about the temptation to get one's "fair share" by defining one's needs more aggressively if provision by central authorities is based on one's perceived "needs."

In addition to the two side benefits noted by Clark and Lee of markets' mundane morality, let me add a third. Specifically, while the caring at the heart of free markets is not sacrificial, it still involves an important form of caring that drives virtuous behavior. That is, in pursuing one's interests, one fundamentally has to care about making one's exchange partner at least as well off as she was prior to your arrival. If that important caring threshold toward one's exchange partner isn't met, the deal that promotes your own interests along the way will not get done.

To really succeed in business, moreover, generally requires ramping up the number of exchanges in which one engages—scale and repetition integral to promoting cooperative behavior as noted in the previous section. The caring for others required along the way, albeit driven by self-interest and not sacrifice, raises our moral game.

In contrast to the morality nurtured by the nonsacrificial caring inherent in markets, it borders on folly to await the arrival of a "new man/woman" through some alternative means and possessing "an impressive willingness to sacrifice for the common good and have a benevolent concern for others—many others—without regard to their race, nationality, or religious beliefs" (Clark and Lee 2011: 19–20). While communism has long sought to remake the human character, for example, there is little evidence of any success. Murray (1991) indeed argues that communism has the exact opposite effect and encourages more rather than less selfishness.

Finally, it is mistaken to assume that individuals forgo their self-interests when operating in economic systems involving greater central planning. For example, the prominently cited multigroup capture model (Peltzman 1976) posits wealth transfers as being at the heart of the political marketplace in which self-interested politicians are the suppliers and the demanders are competing interest groups.

Of course, just as in the market sphere, individuals operating in the political arena bring with them their pecuniary as well as nonpecuniary interests. The latter include ideologies of how to make the world a better place that can differ markedly across individuals (note the different philosophies espoused by Barry Goldwater and Ted Kennedy) yet still be important determinants of policymaker as well as constituent behavior (Kalt and Zupan 1984).

Markets and Inequality

Winston Churchill quipped that "the inherent vice of capitalism is the unequal sharing of blessings; the inherent virtue of socialism is the equal sharing of miseries." While a number of studies show that free markets increase inequality (see, for example, Smeeding 2005), at least as measured by Gini coefficients, these studies tend to miss the overall beneficial impact of capitalism on living standards (Reynolds 2006).

Ridley (2010) points out that the number of people around the world living in absolute poverty (defined as earning less than a 1985 dollar a day) has shrunk by more than half, to 18 percent, since the 1950s and that, according to United Nations estimates, poverty has been reduced more in the last 50 years than in the previous 500.

Between 1955 and 2005, the average human being's income tripled, life expectancy increased 33 percent, and the odds of burying a child declined 67 percent. Within these broader averages, furthermore, it is hard to find narrower regions where per capita real income and life expectancy declined:

> The average South Korean lives twenty-six more years and earns fifteen times as much income each year as he did in 1955 (and earns fifteen times as much as his North Korean counterpart). The average Mexican lives longer now than the average Briton did in 1955. The average Botswanan earns more than the average Finn did in 1955. Infant mortality is lower today in Nepal than it was in Italy in 1951. The proportion of Vietnamese living on less than $2 a day has dropped from 90 percent to 30 percent in 20 years [Ridley 2010: 15].

In addition, inequality measures miss the significant mobility by individuals between income classes over time. For example, in a recent investigation of tax returns in the United States, Auten and Gee (2009) find appreciable mobility by individuals between income classes over the 1996 to 2005 time period. Over 55 percent of individuals moved to a different income quintile between 1996 and 2005.

Roughly half of those in the bottom income quintile in 1996 moved to a higher group by 2005.

Median real income grew by 24 percent and two-thirds of all taxpayers saw their real income increase between 1996 and 2005, according to Auten and Gee. The gains in real income, moreover, were more concentrated in the lowest income classes. Median incomes for those initially in the lowest groups increased more in percentage terms than those in the highest groups. The median income in the highest income group actually declined over the time period studied.

While time brings valuable opportunities for improvement for those who start at the bottom of the income ladder, maintaining relative income success is challenging for those who start at the top of the heap. According to Auten and Gee, fewer than half of those individuals in the top 1 percent income class in 1996 were still there in 2005.

Critics of the income inequality associated with free markets also often neglect that any attempted remedies require the use of force through government action, which limits freedom by punishing successful individuals and impedes wealth creation. Dorn (2002) credits Bauer, like the great 18th century classical liberals, for recognizing the key linkage between individual freedom and economic development.

Besides diminishing freedom and wealth creation, government efforts to alleviate poverty can have other unintended consequences. Berlin (2007), for example, notes that while the share of Americans living in poverty fell in half between 1945 and 1973, it has barely budged since then.[7] Berlin argues that the two principal explanations for this standstill in the war on poverty since 1973 are falling real earnings among low-skilled workers and an increase in children living with a lone parent. The increased rate of lone parenting, according to Berlin, is driven by a tax and transfer code that doesn't provide sufficient rewards for work and discourages marriage.

Much like Thomas Edison's explanation for his success, it is hard to understate how much of income generation and any resulting inequality is driven by perspiration or work. While the top quintile

[7]Eberstadt (2008) provides a critique of the official poverty rate and argues that it is, in reality, a "broken compass"—a flawed and increasingly misleading index of poverty in the United States.

produces and receives roughly half of the income in the United States, it also accounts for 5.5 times as many full-time workers as the bottom fifth (Reynolds 2006). Thus, any government program seeking to divide income equally will have disastrous consequences on wealth generation. This is because such a policy would effectively be asking the most productive quintile to put in 5.5 times more effort for zero return.

Browning (2008) summarizes the profound negative impact of government involvement on wealth creation and the average income level in the United States. He estimates that annual GDP would be $4 trillion greater and the average American's income level 25 percent higher were it not for the deadweight losses associated with government-orchestrated income transfers.

Who Are You Going to Blame?

Notwithstanding free markets' relative effectiveness in promoting the wealth of nations and providing intertemporal opportunities for individual advancement, often the desire remains to find a cause for untoward outcomes. This is especially true in the media, based as it is on good/bad-guy storytelling and the push to identify who, what, where, why, and how in increasingly compact fashion. In this setting, the more complex and counterintuitive economics perspective is at a disadvantage.

Moreover, even if the story can be told in a compelling fashion, human beings remain at the core of economic activity regardless of how it is organized—whether through free markets or central planning. Whenever human beings are involved, we bring with us not only our finer qualities but our capacity for less than virtuous behavior.

The lack of integrity leading to Mark Hurd's downfall as Hewlett Packard's CEO and Bernie Madoff's investment management activities are but two recent examples of men behaving badly in a market-based economy. To condemn capitalism for individuals' transgressions, however, is as misguided as assuming reflexively that command-and-control systems fail to promote virtue due to examples such as the Soviet regime's persecution of Aleksandr Solzhenitsyn and the Karzai family pocketing an unknown portion of U.S. aid to Afghanistan.

Akin to their ability to generate material well-being, the extent to which various economic systems promote virtuous behavior is a relative question. While it may be natural to identify culprits when market-based systems break down, this does not imply that free markets are more likely to breed culpable behavior. Indeed, Murray's (1991) analysis of socialism and its effects on individual behavior as well as the empirical examples in the previous section suggest just the opposite relationship.

Greece's recent economic meltdown illustrates how increasing government economic intervention debases the virtue of its citizens. Greece's national debt amounts to over $250,000 for every working adult and, over the past few decades, the Greeks have turned their government "into a piñata stuffed with fantastic sums" that gives "as many citizens as possible a whack at it" (Lewis 2010). As noted by Noonan (2010):

> The average government job pays almost three times as much as the average private-sector job. The retirement age for "arduous" jobs, including hairdressers, radio announcers, and musicians, is 55 for men and 50 for women. After that, a generous pension. The tax system has disintegrated. It is a welfare state with a cash economy.

Lewis (2010) describes the pernicious effect on the Greek character:

> It is simply assumed that anyone who is working for the government is meant to be bribed . . . . Government officials are assumed to steal. . . . [According to one tax collector, tax fraud and cheating have] "become a cultural trait." The Greek state was not just corrupt but corrupting. Once you saw how it worked you could understand a phenomenon which otherwise made no sense at all: the difficulty Greek people have saying a kind word about one another. . . . Everyone is pretty sure everyone is cheating on his taxes, or bribing politicians, or taking bribes, or lying about the value of his real estate. And this total absence of faith in one another is self-reinforcing. The epidemic of lying and stealing makes any sort of civic life impossible.

An Achilles' Heel?

While cooperative behavior is the expected outcome in a repeated prisoner's dilemma setting, a key assumption is that the players confronting each other are the same through successive interactions. This need not be the case in a market-based economy. This is because broader markets bring opportunities for interaction with an ever-wider set of different exchange partners. Due to the non-repeat interaction, are we back to square one and the predicted outcome of a one-shot prisoner's dilemma in which there is no future with the same partner and hence less cooperative, less virtuous behavior in the present?

Take the case of my driving behavior. It seemed that my driving improved when visiting Dartmouth as a faculty member in 1995 than when returning to USC in Los Angeles. Located, as Dartmouth is, in the small community of Hanover, New Hampshire, I was careful not to cut off other motorists at intersections there for fear of running into them elsewhere. My fellow Hanover drivers, that is, were more likely to be members of my Dartmouth community (faculty, staff, or students). By contrast, the odds of ever running into fellow Los Angeles motorists again were miniscule.

Notwithstanding the foregoing example, there are some powerful forces promoting cooperative behavior even when successive interactions involve different partners. One of these forces operating in cases of imperfect and asymmetric information is the incentive to acquire (or disseminate) information. For example, even though there may be a temptation on the part of sellers in asymmetric information cases to peddle lemons (Akerlof 1970), there are mutual gains to be realized if consumers seeking high-quality products can be paired with sellers of high-quality products.

Current examples of information services in broader markets promoting contractual performance include: *Consumer Reports,* evaluating products from toasters to fire insurance; *U.S. News & World Report,* ranking educational providers; *Investors Dealers Digest,* reporting on investment banking firms; and credit-rating agencies like Moody's and Dun and Bradstreet (Brickley, Smith, and Zimmerman 2002).

Of course, information itself is a scarce good, and there are costs to acquiring and disseminating it. That is one reason why people are not fully informed: the benefits from acquiring information about product quality are not always worth the costs.

Among the more important mechanisms sellers have to provide information is through developing a reputation or a brand name.

Over the ages, countless writers have proclaimed the worth of a good reputation. For example, Shakespeare ([1637] 1974: 1121) in *Othello* wrote "Who steals my purse steals trash; 'tis something, nothing; 'Twas mine, 'tis his, and has been slave to thousands; But he that filches from me my good name robs me of that which not enriches him, and makes me poor indeed."

Milgrom, North, and Weingast (1990) note the institutions that historically have arisen to enhance the value of reputations as markets broaden. During the expansion of trade in the Middle Ages, these institutions included the law merchants and private judges associated with fairs who encouraged merchants to behave honestly, imposed sanctions on cheaters, provided evidence against cheaters, and encouraged malefactors to pay any judgments associated with their commercial transgressions.

Klein and Leffler (1981) show how investments in firm-specific, nonsalvageable assets such as advertising and brand names that ensure a price above incremental cost motivate sellers to deliver quality products in the present so as to be able to capture the future quasi-rents associated with their investments.

Vela (2008) examines the role that reputational factors play in ensuring integrity in the context of tax compliance in the United States by members of various professional occupations. Tax compliance is measured by the fraction of business income found to be underreported by the IRS. He finds that cheating on taxes is negatively correlated with the importance of integrity to an occupation. Where a tax conviction is more likely to harm one's professional reputation and, in turn, more significantly lower future income, cheating on taxes diminishes. For example, according to Vela, lawyers underreport less than 10 percent of their business income (versus 38 percent for construction trades and 32 percent for personal care workers) because the professional cost associated with such cheating is relatively high in terms of lost future income.

While newer technologies and the broader markets that characterize our present age would seem to have created an expanding array of opportunities for frauds, cons, and criminals to thrive, there has been a concurrent growth in reputational devices to mitigate such uncooperative behavior. Witness how the online auction system eBay has grown from nothing in 1995 to roughly $9 billion in sales by 2011 largely through nonrecurring interactions between ever-changing pairings of different sellers and buyers.

Resnick et al. (2006) show how eBay's growth has been aided by a rating system at each transaction's close whereby buyers evaluate sellers. The feedback system is widely employed (in over half of all transactions) and, perhaps surprisingly, more than 99 percent of feedback on sellers is positive. Sellers have an important means, through the rating system, to build a reputation that has value to them in future transactions. Consumers, in turn, make better-informed purchasing decisions based on the accumulated historical performance data about sellers.

Resnick et al. auctioned carefully matched items from two sellers. One seller had a superb, long-established reputation, based on the positive feedback of past buyers. The second set of items was auctioned by the same seller, but operating under a newly established identity and no track record. Resnick et al. found that the established positive identity brought in 7.6 percent more revenue, on average, per transaction.

Beyond reputation, sellers of high-quality products can offer guarantees or warranties. This commitment conveys that the products are high-quality, and firms are willing to incur the costs because they can charge more when buyers believe that they are getting a high-quality product. A key issue is whether the information provided by the seller is believable. A guarantee is more believable if offered by an established firm than if offered by a stranger peddling "gold" watches on a street corner.

Liability laws also incentivize sellers to avoid at least the most serious quality defects because firms can be bankrupted by suits from consumers. And, from an evolutionary biology perspective, Axelrod (1984: 52) shows that, through round-robin tournaments featuring the prisoner's dilemma, cooperative strategies proliferate over time while less cooperative ones become less common: "Not being nice may look promising at first, but in the long run it can destroy the environment it needs for its own success."

Of course, the effectiveness of the mechanisms markets employ to promote cooperative behavior when repeated play of a prisoner's dilemma game occurs between different players in successive rounds is ultimately a testable proposition. The effectiveness is likely to vary by setting and time period and depend critically on the ability of players to acquire historical information for use in future interactions.

Consider Facebook and the information it provides about individuals that can be taken into account by others. What individuals post on their Walls affects college admissions/scholarships, dating, hiring, and divorce lawsuit outcomes. Similarly, the reader reviews Amazon publishes online influence book sales much as user ratings in a variety of outlets affect restaurant patronage, movie audiences, course and school enrollments, airline choices, and car sales. Jarvis (2009: 102) notes the same beneficial effect associated with Google's growth and the enhanced ability thereby for individuals to access information about others.

The used car market has been the archetypical example cited by the economics literature as dealing with a potential "lemons" problem (Akerlof 1970). For reasons already articulated, it is doubtful that bad-quality used cars will totally drive out good-quality used cars—the extreme case predicted by the lemons model. However, it is possible that asymmetric information has an effect on the way markets for used cars operate. One study, by Lacko (1986) of the Federal Trade Commission, examined this issue through survey data.[8] Lacko reasoned that to the extent the lemons problem was relevant, the quality of used cars should vary by type of seller. Cars purchased from used car dealers (who may provide warranties and have reputations at stake) and from friends or relatives should be of higher quality than those purchased from unknown individuals through a newspaper advertisement.

Quality is difficult to measure, of course, and Lacko relied on three different measures for his study. One was based simply on a buyer's own evaluation of a car's mechanical condition using a 10-point scale, with 1 being a lemon and 10 being a "gem." On this scale, the average used car's condition was rated at 6.65. After controlling for various factors (such as age and mileage), Lacko found that for cars between 1 and 7 years old there were few differences among the various types of sellers. This runs contrary to the lemons model. On the other hand, for older cars (8 to 15 years old), cars purchased from dealers, family members, or friends were rated higher than those purchased through a newspaper ad from a stranger. Cars purchased from a used car dealer, for example, were rated 0.91 points higher than those purchased through an advertisement.

[8]The summary of Lacko's study draws on Browning and Zupan (2008).

The Lacko study suggests that asymmetric information about the quality of used cars has no effect for cars less than eight years old and a limited effect for older cars. Apparently, consumers do obtain enough information through the sorts of channels mentioned earlier to avoid the extreme outcome predicted by the lemons model of low-quality products entirely driving out high-quality products. It must also be kept in mind, moreover, that markets are dynamic and where there are any further opportunities for mutual gain, entrepreneurs have an incentive to exploit the prospective gains. In the case of the used car market, for example, recent years have seen the advent and growth of firms such as Auction Direct specializing solely in high-volume sales of used cars and CarFax, which supplies accident reports of previously owned vehicles. Such firms have been acquiring market share by tapping into reputational mechanisms facilitating matching consumers seeking high-quality used cars with sellers of such cars and capitalizing on any learning-by-doing and scale advantages.

The empirical evidence of Ridley (2010) and others noted earlier, indicates that markets regularly rise to the occasion of promoting cooperative behavior when sequential play of a prisoner's dilemma game occurs between a changing cast of players. Ultimately, however, the foregoing discussion suggests many promising opportunities for further testing the relative extent to which free markets foster virtuous behavior—especially compared to other means such as religion and socialism.

With regards to religion, most of the world's major sects feature the concept of an indefinite afterlife (Zupan 2010). The repeated-play version of the prisoner's dilemma indicates why such an afterlife promotes a religion's precepts. The more that future payoffs matter, the more the temporal behavior of adherents will accord with a religion's tenets (Telser 1980). The tenets of most of the world's major religions, moreover, include integrity and other forms of cooperative behavior.

As noted by Clark and Lee (2011), religious institutions' civilizing role must be acknowledged, especially given their durability and the significant amount of resources devoted to them. That said, the magnanimous morality promoted by religion has some limitations noted earlier and offers a narrower set of opportunities for repeat interaction across time, place, individuals, and products—at least relative to free markets.

Conclusion

Since Adam Smith, the benefits of free markets have become increasingly well-known. Chief among them is the widening of individual choices through opportunities for exchange as private property rights are more fully specified and barriers to trade lifted.

While the role free markets play in promoting prosperity may be well known, the extent to which they foster other virtues—the positive one of integrity and normative ones drawn from the spheres of morality, ethics, and legality—is more opaque. Indeed, the common perception, at least as portrayed in media and policymaking circles, is that free markets coarsen rather than civilize. After all, how could any system predicated on self-interest and competition between individuals facilitate cooperative behavior?

This article's central point is that the common wisdom regarding free markets and their impact on a wide array of positive and normative virtues is dead wrong. In fact, free markets—based on private property, freedom of contract, the rule of law, and individuals' pursuit of their interests—represent the most effective means for promoting integrity and other forms of cooperative behavior through their ability to foster repeated, mutually beneficial exchange as well as specialization.

The opportunity for repetition conveys a future and, as is convincingly demonstrated by the simplest of game-theory constructs, the prisoner's dilemma, the outcome is vastly different when there is a future. More specifically, one-shot play of the prisoner's dilemma results in all involved parties being worse off by pursuing their self-interests than they could be if different choices were made. By contrast, the opportunity for continued exchange produces an entirely different and more cooperative result.

Free markets, based on clearly defined and enforced private property rights and the liberty of individuals to pursue their interests, maximize the opportunities for repeat interaction across time, products, places, and people. By creating the broadest possible opportunities for repeat interaction and thereby a future, free markets have an edge, relative to other systems for organizing economic activity, when it comes to promoting prosperity as well as the practice of integrity and other cooperative virtues.

Stressing free markets' relative benefits, of course, does not mean that the system is flawless. As is well known, free markets can fail to satisfy the conditions for Pareto optimality in cases of market power, imperfect information, and externalities/public goods (when private property rights cannot be fully specified and readily enforced). Monitoring costs and the resultant agency problems faced by stockholder-principals seeking to ensure that their manager-agents appropriately promote their interests (Jensen and Meckling 1976) create further potential for breakdowns—especially if managers lack appropriate "skin in the game" or are rewarded in ways failing to ensure that they bear some of the future risks associated with their present corporate actions.

Any analysis of a particular economic system's efficacy, however, must inherently be relative to other possible options. Thus, the potential costs of market failure must be weighed against the costs of government failure (Tullock, Seldon, and Brady 2002) associated with approaches involving greater central planning.

Further work also remains to be done to empirically validate the central hypothesis of this article regarding free markets and their relative ability to foster virtue. The hypothesis is admittedly counterintuitive. Yet, much of the explanatory power of economics (a science one colleague wryly characterizes as "common sense made hard") since Adam Smith first wrote about the beneficial workings of the Invisible Hand, stems from illuminating similarly counterintuitive concepts.

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