
**A Market Theory of Virtue
as General Human Capital**

In the long run, the public interest depends on private virtue.

--James A. Wilson

Abstract

This paper deals with one particular valuable quality which can enhance individual success at work, in politics, or in marriage, namely virtue or trustworthiness. The theory derives a demand for virtue by employers, a supply of virtue by workers, and integrates demand and supply in a market for seemingly virtuous workers. Special attention is devoted to marriage as seemingly virtuous behavior, and more hypotheses are derived regarding marital differentials in earnings. Among the major insights of this market model of virtue are a new interpretation of the value of age, individual investment in virtue, and the value of making virtue general rather than specific.

Introduction

The public interest depends on private virtue. So do private interests. Firms benefit from virtuous workers to the extent that workers committed to their employer display a smaller tendency to quit and are less likely to destroy their firm's equipment. Virtue or loyalty is a means of preventing moral hazard. As was pointed out by Arrow (1975), "every commercial transaction has within itself an element of trust." Trust, a component of vir-

This is a revised version of "Virtue, Work, and Marriage," published in *Applied Behavioral Economics*, edited by Shlomo Maital, Wheatsheaf and N.Y.U. Press, New York, 1988. I am indebted to Joel Guttman for stimulating my interest in this topic, and to Jack Hirshleifer, Michael Naughton, Harinder Singh and participants at the Second Annual Conference of the Society for the Advancement of Behavioral Economics and at a Seminar at Bar-Ilan University for helpful comments.

tue, facilitates productivity not only within a firm, but also in transactions of all kinds.

People and firms will therefore prefer to associate with virtuous, trustworthy, people. But information on other people's virtue is extremely difficult to obtain. This explains in part why firms often rely on costly devices to gather such information, such as extensive interviews, polygraphs or graphological tests. Another way for firms to get information on a job candidate's virtue is to consider their candidates' past behavior in other areas which may indicate an underlying tendency for virtue. Such behavior I call "seemingly virtuous behavior." Following Becker's (1964) distinction between general and specific human capital, it is assumed that seemingly virtuous behavior is of a general nature. Virtue displayed in one area of life is valuable to another area of life. Any human relation can serve as evidence of virtue valuable in the same area of life, or in a different area. Employers may investigate whether a person is known as a good worker, a good son or daughter, a good husband or wife, a good soldier, a good tenant, or a good citizen. Similarly, wives, husbands, or citizens may want to check on the virtue credentials of candidates for marriage or for public office.

If seemingly virtuous behavior is rewarded, individuals may invest in such behavior as a means of increasing their success in the future. Given the general nature of virtuous behavior, one obtains markets for seemingly virtuous individuals.

In the following analysis, I pursue two examples of activities in which people engage, at least in part, in order to invest in their *virtue capital*: marriage and military service.

Marriage as Seemingly Virtuous Behavior. A candidate's observed family behavior often serves as an indication of possible virtue, and therefore plays an important role in hiring and promotion. Employers may investigate marital status, duration of marriage, marital fidelity, or number of children. Employer's preference for virtue and married men's potentially higher virtue relative to unmarried men is one possible explanation for the higher wages married workers have been observed to receive, keeping standard wage determinants constant.¹ Some of the alternative explanations for such marital differentials in men's earnings are (1) that married men acquire more human capital and (2) that the relation between marital

status and earnings is spurious: according to the "economics of marriage," men with higher incomes are more likely to be married.

The "economics of marriage" explanation can also account for the fact that marital differentials are generally found for men, and not for women, in view of the hypothesis that women earning more are less likely to be married. That marital differentials for men exceed marital differentials for women can also be explained using a "seemingly virtuous" explanation: exemplary and stable marital behavior is more likely to indicate true virtue in the case of men than in the case of women. This follows from biologically or culturally given differences which lead women to benefit from marital stability more than men. Men who stay married despite the basic forces driving them in the opposite direction are more likely to be virtuous than women who more often prefer to stay married, an argument that was pursued in Chapters 4 and 9. The latter chapter documents gender asymmetry in individual preferences for commitment in marriage.

People have an incentive to advertise their seemingly virtuous family behavior. Accordingly, Kanter (1977a) reports that in a large corporation pictures of wives and children adorned men's offices so commonly that they seemed almost mandatory.

Heroism as Seemingly Virtuous. Firms also appear to value seemingly virtuous behavior in the form of service to the community. Heroism demonstrated at war often serves as a wage booster in countries with a recent history of war. For instance, when they leave the army, Israeli officers with a heroic war record obtain jobs that are better than jobs offered to people with otherwise comparable credentials and experience. It is expected that even at peace time *ceteris paribus* people who volunteer to more dangerous military positions are likely to reap some benefits from it when applying for positions for which a tendency for virtue is particularly appreciated.

A piece of Japanese economic history can also reinforce this viewpoint. An often mentioned partial explanation for 19th century Japan's economic revolution is the availability of a *samurai* class who had been trained both as warriors and as bureaucrats espousing the Confucian principle of public virtue. These same *samurai* later became the captains of a modern factory system (see for instance, Clark 1975, Morishima 1982). Their Confucian ideology stressing virtue benefited their own advancement as well as that of Japanese

industry.

Next, a market model is applied to analyze seemingly virtuous behavior such as marriage and heroism.

Theory

Virtue is conceived of as a form of human capital in which people invest in order to increase their future success at work, in marriage, or in other areas where virtue may be valuable. I start with analyzing the demand for virtue, and then consider the supply and the market where demand and supply are juxtaposed.

The Demand for Virtue

Virtue, called V , cannot be observed. What is observable is behavior v , termed "seemingly virtuous behavior." The observer does not know, however, whether v is behavior out of true virtue or faked virtue. It is assumed that $v = v(V)$, where the first derivative is assumed to be positive. In other words, based on past experience, seemingly virtuous behavior is interpreted as a signal reflecting real virtue. I am now analyzing the demand for an individual's seemingly virtuous behavior by another party. First, I consider the demand for virtue by employers.

Demand by Employers. V increases a worker's i productivity, as reflected in the production function $Q_i = f(t_i, K_i, V_i)$, where Q is output by worker i , t time worker i spends at work, and K physical capital the individual uses at work. The cross-derivatives of Q by t and V and of Q by V and K are positive, i.e. V reinforces the productivity of labor and capital.

V 's positive effect on productivity may be due to V 's discouraging effect on the probability to quit, which in turn leads to higher levels of specific training. Workers' virtue also reduces shirking and could save the firm monitoring costs. The worker is less likely to misuse capital. If one also adds time of other workers to the production function, an additional source of shirking lies in the absence of well-defined property rights. Once a worker operates with a team his individual extra work effort is a public good. Therefore, individual workers have an incentive to shirk and be free-riders

(Leibenstein 1982) with respect to their team or the firm as a whole. Virtue reduces free-riding tendencies by employees, and therefore increases workers' productivity. Virtue in this context is similar to loyalty or discipline. The statements above bring some previous literature to mind. Marxist economists, for instance, wrote about the value employers derive from a well-disciplined work force (Himmelweit and Mohun 1977, Bowles 1985). Also, Maital and Maital (1984) considered cooperative workers as a benefit to firms, and Ouchi (1981) found that loyalty enhances productivity in Japanese firms and Z-organizations in the U.S.

A firm's demand for seemingly virtuous behavior v is downward-sloping if the marginal productivity of V is diminishing. The aggregate demand for v by employers, the sum of individual demands, will also be downward-sloping. The demand for workers who have displayed virtuous behavior v in the past is also downward-sloping, as depicted, in Figure 13.1. Employers will demand more seemingly virtuous behavior the larger V 's contribution to productivity and the more v is associated with V .

To the aggregate demand for virtue and virtuous behavior by firms one can add the demand by government and the demand by potential spouses. It is assumed that the same virtue capital is valuable in all these different spheres of life.

Demand by Government. Public employers--eventually, the voters--value virtuous employees for the same reasons that they are valued by private firms. This explains why the entire personal history of politicians running for office undergoes thorough examination. Candidates can lose an election as a result of the disclosure of an extra-marital affair or an embarrassing military episode.

Demand for Virtue in Marriage. Spouses can also be viewed as each other's employers. Marriage markets of the kind analyzed by Becker (1974) and in Chapters 3 and 4 establish wages for spousal labor in ways similar to those observed in more conventional labor markets. It is therefore predicted that people displaying seemingly virtuous behavior outside their marriage will receive higher quasi-wages in marriage. Although measurement problems make quantitative applications of this theory to the family harder to come by, the importance of virtue to families may make this theory even

more relevant to the family than to the firm or the government (see Maital and Maital 1984). Even though this theory is relevant to demand for spouses and politicians as well as to the demand for workers, for simplicity we will focus on workers.

We now look at some of the determinants of the aggregate demand for seemingly virtuous workers, i.e. workers who seem to have behaved virtuously in the past. Hypotheses are formulated in terms of one possible indicator of virtuous behavior: married status. The demand for seemingly virtuous workers, such as married workers, depends in part on the demand for (true) virtue.

Determinants of the Demand for V, Actual Virtue. Workers' virtue is more likely to be valuable to employers in the following circumstances:

More capital-intensive jobs. Capital and labor generally complement each other, and worker's productivity is higher when workers use more capital. Consequently, the value of virtue and of seemingly virtuous behavior such as a reputable marital history are higher in jobs with higher capital intensity. It follows that

Hypothesis K₁₀

The more a job is capital-intensive, the more one expects marital differentials in earnings.

Hourly or monthly contract. When type of contract makes shirking more likely, virtue is more valuable to the employer. For instance, if workers are paid by the hour shirking is more likely than if workers are paid by piece-rate. It follows that

Hypothesis K₁₁

Higher marital differentials in earnings are expected in salaried jobs than in piece-rate jobs.

Bureaucracy. In large corporations or bureaucracies, where it is easier for a worker to act as a free rider at the expense of fellow workers, virtue can be more valuable than in small organizations. The more bureaucratic an organization the more shirking is potentially beneficial and the harder it is to monitor work efforts. It is consequently not surprising that the ultimate employers in a

democracy, the taxpayers, seem to pay a lot of attention to seemingly virtuous behavior when voting for politicians. Voters seem to look for leaders capable of transcending self-interested motivations (Hirshleifer 1987). They often value any superficial indication of such motivation as expressed by the apparently virtuous attitudes of politicians towards wife, children, and even grandchildren. Heroism in war (and peace) seems to be rewarded in politics too. Politicians can generally improve their public image by ostentatiously attending church services.

In non-democratic regimes aspiring public servants can also reap benefits from displaying seemingly virtuous behavior and from openly espousing benevolent ideologies. Perhaps even more so than in democracies, as the potential losses the public stands to lose from shirking by its "servants" are so large. The traditional Chinese and Japanese tested their bureaucrats for their knowledge of Confucian principles. Candidates for leadership in the Catholic church and Marxist regimes need (needed) to appear as staunch defendants of the loftier parts of the official doctrines.

Given the value of virtue in bureaucracies, it follows that

Hypothesis K_{12}

The more bureaucratic an organization, the more one expects marital differentials in earnings.

Longer tenure. Virtue is more valuable in cases where quits are more costly, in part a matter of industrial structure. In Japan, for example, expected job tenure is higher than in the United States. Consequently,

Hypothesis K_{13}

Higher marital differentials in earnings are expected in jobs with long expected tenure than in jobs with high quit and lay-off rates.

Accordingly, marital differentials in earnings are expected to be larger in a country like Japan, where workers hold longer tenure at their jobs, than in the United States. For instance, while in the United States some doors close to unmarried candidates in the corporate and political world, that is even more so in Japan, where firms also act as

marriage-brokers (Browning 1985).

Type of task. Virtue is more valuable where a worker is employed in a task more amenable to shirking. For example, it is easier to shirk for a worker employed in marketing than for a worker producing a physical object (see Barzel 1987). We thus obtain the following hypothesis:

Hypothesis K₁₄

The more tasks are amenable to shirking, the more the workers performing these tasks are expected to experience marital differentials in earnings.

Creativity. To the extent that emphasis on loyalty hinders creativity, virtue is going to be more in demand in less creative tasks (see Maital and Maital 1984 on innovation and corporate culture).

Hypothesis K₁₅

The less tasks are creative, the more the workers performing these tasks are expected to experience marital differentials in earnings.

Certain professions are likely to experience marital differentials in earnings for a number of reasons related to hypotheses 10 to 15 presented here and to many of the hypotheses presented in the previous chapter. For instance, corporate executives hold capital-intensive positions, corporations tend to be bureaucratic institutions, more responsibility and a higher place in the corporate ladder opens more opportunities for shirking, earnings profiles of executives are steep, and executives can expect long tenure. Accordingly, the positive differential between the earnings of married and unmarried men is expected to be larger in the case of corporate executives than among other workers with similar characteristics.

The following are suggestive facts. In 1969, 93.1 percent of the male managers earning \$15,000 or more (nearly all managers) were married. That percentage rose as salaries increased. Senior executives also seem to be much more likely to stay married to the same wife than men in the same age bracket. For instance, according to a recent survey of children (between 14 and 22 years old) of senior

executives in U.S. corporations with sales of \$70 million or more, only a surprisingly low 8 percent had parents who had ever been separated or divorced (Crossen 1985). In contrast, the father of an average child in that age group who would on the average be forty years old in 1980 had approximately a 30 percent probability of having been divorced (Schoen and Kluegel 1985). An alternative interpretation seems unconvincing. In principle, causality could run the other way: the high income earned by executives could increase the likelihood of marriage and reduce the likelihood of divorce. But men earning higher incomes might have a higher tendency to divorce than men with average incomes. In particular, Becker, Landes, and Michael (1977) have shown that men earning more than would be expected at time of marriage (possibly the case of many successful corporation managers) are more likely to get divorced than men earning similar incomes in jobs where virtue is less valuable.

Other Determinants of the Demand for v , Seemingly Virtuous Behavior. The demand for v is also larger the more v is likely to vary positively with V . This is more likely the more v is of a general nature.

The generality of virtue is an important element of the demand for seemingly virtuous behavior. If a good husband is also a good worker, his virtue is of a general nature. If what makes a soldier or a worker good is of use to others, his virtue is general and not specific to the context in which he operated. The more virtue is of a general nature, the more seemingly virtuous behavior expressed in one sphere of behavior is applicable to other spheres, and the higher the demand for seemingly virtuous behavior.

We now turn to an analysis of the supply of workers who have displayed seemingly virtuous behavior.

The Supply of Virtuous Behavior

Short Run Supply. At any given time t , an individual can engage in j kinds of seemingly virtuous activities. Each activity v_{ij} produces utility. For example, a two-period utility function is presented as

$$= U[U_1(v_{11}(V), v_{12}(V), \dots, v_{1j}(V), x_1), U_2(v_{21}(V), v_{22}(V), \dots, v_{2j}(V), x_2)$$

where x_t are market goods. Activity v_{11} is work in period 1. Other activities could be various forms of leisure or work performed for a spouse, as discussed in Chapter 3. It is assumed that no activities are joint. The individual v_{ij} 's are generally positively related to (the stock of) V . The individual maximizes this utility function subject to a time constraint

$$T_1 = \sum v_{jt}$$

and a budget constraint

$$w_1 v_{11} + \frac{w_2(v_{11}, \dots, v_{1n}) v_{21}}{(1+r)} = p_1 x_1 + \frac{p_2 x_2}{(1+r)}$$

where r is a discount rate.

In period 1, the first activity v_{11} is assumed to be the only one generating income. The individual knows that his wage in period 2, w_2 , varies positively with the experience the individual accumulates in period 1, including past seemingly virtuous behavior. Some activities may be consciously chosen in period one in order to advertise one's potential for virtue. In other words, the individual might invest in some activities v_{ij} with the purpose of increasing future wages, or may engage in more such activity than would otherwise be the case.

Consider the example of workers. Workers may get married in period 1 and display exemplary devotion to their family, thereby increasing their wage in period 2. Likewise, volunteers to the marines or other relatively dangerous assignments may have such investment in mind. In that sense, volunteer activities generate information as a beneficial side effect.

The supply of a seemingly virtuous activity v_j is upward sloping if the marginal disutility of engaging in such activity v_j increases with v_j . By definition, virtue implies that an individual gives up some personal utility for the benefit of others. The disutility of v_j can be expressed in terms of the foregone utility of another v_j producing more utility at the margin (follows from the first-order conditions of optimization). The higher the return to v_j in terms of higher wages in the next period, the more a person is willing to engage in v_j and to move along his supply curve. The better the substitutes to

v_j available to the individual, the more elastic the supply.

More virtuous people, i.e. people with higher stocks of V , will have a supply that lies to the right of that of people who are less virtuous. It is also expected that for many activities v_{ij} virtuous people will supply a positive number of hours at zero wage. The supply of some activities may be more wage elastic than that of others, depending on various institutional and technical constraints.

The individual faking virtue is giving up much less when engaging in a given form of v_j than the individual who really attempts to serve others' needs. Consequently, fakers may supply more of a given type of v_j than genuinely virtuous people.²

The aggregate supply of seemingly virtuous activity is obtained by aggregating individual supplies.

Long Run Supply. The model above assumed the stock of virtue V as given. The model could be expanded to include investment in V . Virtue may be learned from experience. In that case the stock of V in period 2 would increase when the person engages in seemingly virtuous activities during period 1.⁴

Individuals could also invest in their stock of V by consciously altering the "internal locus of control," governing their behavior. (If they solely fake virtue they are influenced by an "external locus of control" such as the firm that will reward them or the concerned father analyzed by Becker in the Rotten Kid theorem).⁵

Virtue can be acquired in various ways, using the intellect, feelings, actions, or a combination of these. An analysis of the mechanisms for such acquisition is beyond this chapter's scope. Deliberate exposure to virtuous people is one possible strategy which involves some learning-by-doing, i.e. virtue is acquired through action.

This type of voluntary reinforcement of one's virtuous tendencies is a case of deliberate character planning, and relates to the idea of pre-commitment which has previously been discussed by economists. Akerlof and Dickens (1982), for instance, report that when given freedom in job selection, workers tend to show signs of cognitive dissonance. They tend to ignore information which does not suit them. For instance, they build beliefs whereby they perceive their work as safer than it actually is. Van Raaij (1984) mentions that people may take ski or piano lessons in order to learn to appreciate skiing or music, an example more directly related to the learning-by-

doing of virtue. Similarly individuals may seek the company of virtuous people in marriage, friendship, religious groups, or at work.

Precommitment to virtuous groups reminds of Thaler and Shefrin's (1981) Christmas clubs. People give up some interest earnings in order to commit part of their income for use during a particular season. Also, Schelling's (1978) discussion of self-management deals with steps people can take to improve themselves. Exposed to short run benefits obvious to the doer part of their personality (immediate spending) and long run benefits their planner is aware of (Christmas shopping), people may decide to join Christmas clubs where they receive lower interest on their savings but a guarantee that money will be available right before Christmas. Likewise, people may join Alcoholics Anonymous or Weight Watchers or, more relevant here, a group emphasizing virtue.

Here are some of the factors affecting the supply of workers who have engaged in seemingly virtuous behavior in the past:

1. The cost of engaging in seemingly virtuous behavior. That cost could be low if faking virtue is easy, in part because of little social control. For instance, a man can pretend he is a good husband, and nobody may check on whether that is true or not. In turn, social controls may be a function of size of the community, for example.
2. The amount of (true) virtue the person has accumulated in the past, i.e. *virtue capital*. The more V , the less seemingly virtuous behavior is costly. The teaching of virtue may be subsidized by government or religious organizations. The more such subsidies, the larger the supply of virtuous behavior.
3. The degree of generality of V , virtue capital. Experience in different areas of life can then contribute more to the total stock of V a person has accumulated. The more V , the lower the cost of virtuous behavior.

All these factors lead to a larger supply of virtuous workers, which will be reflected in a shift to the right in Figure 13.1.

Markets for Virtuous Behavior

A market for seemingly virtuous workers is generated when demand and supply are juxtaposed. In period 2, employers have a demand for workers who displayed seemingly virtuous behavior in period 1. On the horizontal axis in Figure 13.1 is the total number of hours of work by workers who displayed virtue in period 1. The supply by workers in period 2 is based on actions in period 1 and responds to rewards in period 2.

This market is defined for a given level of average faking by workers. If faking is common, seemingly virtuous behavior is easy to engage in, and the market will be flooded with a lot of seemingly virtuous workers. Also, demand for seemingly virtuous workers will be low. Consequently, employers end up paying little extra for such workers. Likewise, employers will pay little for past seemingly virtuous behavior if there is a large supply of workers with such experience due to social subsidies for the teaching of virtue. In contrast, where virtue is scarce, i.e. the supply of seemingly virtuous behavior is small, employers will pay a large bonus for workers who seem to be virtuous.

These insights can be applied to the subject of marital differentials in earnings, as marital experience is one kind of seemingly virtuous behavior which tends to be rewarded by employers. The lower the reward for seemingly virtuous workers, the lower marital differentials in earnings.

Hypothesis K₁₆

Higher marital differentials in earnings are expected in societies where faking virtue is uncommon.

This implies that if faking virtue becomes less acceptable over time, the bonus to virtuous workers would increase.

Hypothesis K₁₇

The more virtue is a widespread characteristic in a society, the less one expects marital differentials in earnings.

This implies that if people become less virtuous over time, the bonus to virtuous workers would increase.

It is possible for example, as suggested by Phelps (1991), that

the aggregate supply of seemingly virtuous behavior shifted to the left between 1957 and 1976. Veroff's measure of power motivation in situations where men and women interact, the measure used by Phelps that could be interpreted as inversely related to virtue, increased during those years. This would imply that the pay-off to workers exhibiting marital stability would also have increased during those years.

At the same time, however, the upward trend in divorce that occurred during that period, may decrease the demand by employers for workers who have exhibited marital stability. When divorce is so common, actual marital stability may indicate many things besides qualities of virtue in the worker.

One can construct separate markets for different kinds of workers. In the market for v_j by executives, one expects a high demand for v_j , as virtue is very important to the employer. The more executives are willing to engage in virtuous activities, i.e. the more the supply shifts to the right, the lower the actual reward for engaging in v_j . Employers clearly benefit from a virtuous population.

The state benefits from a virtuous population in its capacity of employer. Moreover, it is in a nation's best interest to have a virtuous population to the extent that this will increase productivity in all activities, private or public. The more virtuous the population, the more there will be volunteering and other activities furthering the public good (Weisbrod 1977, Hirshleifer 1987, Maital and Maital 1984, and Guttman 1985).

Policy Implication: General Standards for Virtue

In a market for (seemingly) virtuous behavior, employers (and others) demand such behavior, and workers supply such behavior. The pay-off for having exhibited virtuous behavior in the past is a function of factors influencing both demand and supply of virtuous behavior.

Given virtue's contribution to productivity, it is in a nation's interest to promote it. One of the ways states have attempted to raise the amount of virtue capital in a population is by playing a direct role in educating and regulating the public.

This paper suggests a novel way by which a nation can encourage individual investments in virtue: it can emphasize the

generality of individual virtuous tendencies. By promoting the general acceptance of well-established standards of virtue and seemingly virtuous behavior, the state increases the benefits individuals can derive from behaving virtuously, and therefore encourages the acquisition of virtue.

For instance, let us assume a given stock of virtue in the population, with a considerable part of that virtue oriented towards specific groups such as families, neighborhoods, firms, tribes, or religious groups. If virtue capital accumulated from experience with one group lacks generality, i.e. it is specific to that group, the potential benefits individuals can reap from acting virtuously are limited. Therefore individuals will not be very motivated to learn how to be virtuous.

More specifically, if a society is divided by race, and virtue exhibited with one race in the form of seemingly virtuous behavior is not valued later by an employer from the other race, individuals are less likely to learn how to be virtuous. Their expected benefits from investing in virtue capital are lowered by the existence of racism which lowers the generality of their virtue capital.

If the state intervenes and encourages substitution of more universal virtue for the virtue existing within groups, individuals can gain more from being virtuous; consequently more investment in virtue will occur, the total stock of virtue will rise, and average productivity will rise. In other words

Hypothesis K₁₈

The more general the standards of virtue in a society, the higher average worker's productivity.

States have played a major role in increasing the generality of virtue. One strategy often used towards that goal is for the state to adopt an official religion, such as Anglicanism in England, Confucianism in China, or Lutheranism in Sweden. National standardization of virtuous tendencies can also be achieved through a variety of national symbols and standards such as royalty, presidency, or a Constitution. Nationalism is thus valuable as a means of generalizing virtue capital.

Some of the most dramatic jumps in economic growth observed in the past can be used as suggestive evidence for the

hypothesis advanced here. For instance, Europe's transformation from separate feudal fiefs into national boundaries helped its economic expansion because it reduced the amount of internal malevolence (violence) inside a country, as is commonly argued by economic historians.

Given the contribution of private virtue to the public interest and the other benefits of virtue mentioned above, one may view the emergence of modern economic growth in Europe as the result not only of the neutralization of inter-tribal and other internal malevolence, but also as the result of the inculcation of national standards of virtue. The same perspective can also be used to integrate the often-noted fact that England and Japan, two of the most noteworthy pioneers in modern economic growth, are islands in which a distinctive national character had developed more than was the case on the adjacent mainland. This encouraged more individual investments in virtue, and consequently more economic growth. As to the United States' economic success, it may be in part attributed to the general standards for individual virtue promoted by the American Constitution and other institutions central to the United States.

Nationalism, while promoting general standards of virtue within a nation, has a cost if it involves lowering the value of other nations, thereby creating potential international conflicts. At the present, when economic growth occurs within a global context, societies promoting the more general standards for virtue at an international level are likely to create more incentives for their workforce to invest in virtue, and thereby giving that society a comparative advantage in workers' productivity. The more general standard for virtue promoted in the United States in comparison to most other countries may explain part of the dominating role the United States is playing in today's global economy.

Summary

Employers appreciate virtue in workers and are therefore willing to pay seemingly virtuous workers a bonus and to speed up their promotion. Workers are willing to act as if they were virtuous or to actually be virtuous, in part as a result of the incentives employers give them. Among the insights the market model presented here has generated one can count (1) the value of general

virtue versus virtue specifically good for a particular group, (2) the idea of investment in virtue, (3) a list of the determinants of seemingly virtuous behavior, (4) more hypotheses regarding the determinants of marital differentials in earnings, and (5) implications for public policy.

An implication for public policy that was emphasized is the importance of general standards for virtuous behavior as a means of contributing to economic growth.

Notes

1. For more on the relation between marriage and productivity at work, see Chapter 10.

2. To these hypocrites one can apply the statement by Pope "Hypocrisy is the tribute that vice pays to virtue" (citation contributed by Jack Hirshleifer).

3. This is a major justification rabbis have given for the biblical commandments that men get married and be nice to their wife during the first year of marriage. Jewish law does not impose parallel commandments on women.

4. These kinds of locus of control have been introduced by Rotter (1966). Becker's (1976) concerned father displays what I call seemingly virtuous behavior to his children. It is not clear if he is truly virtuous when he gives goods to his children, see also Phelps (1988).