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VIRTUE, WORK, AND MARRIAGE

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This paper analyzes the benefits of virtue to employers and derives a demand for virtue and seemingly virtuous behavior. People supply such behavior, in part as the result of incentives employers create. Among the major insights of this market model of virtue are the value of being married, individual investment in virtue, and the value to the state of helping virtue be general rather than specific.

"In the long run, the public interest depends on private virtue" James A. Wilson [1]

I. 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. As was pointed out by Arrow [2] "every commercial transaction has within itself an element of trust". Trust, a component of virtue, 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 why firms often rely on polygraphs and graphological tests. Firms may also consider their candidates' past behavior in other areas, especially if this behavior has often indicated an underlying tendency for virtue in the past. Such behavior I call "seemingly virtuous behavior." If married men tend to be more virtuous than unmarried men, marital status functions as a signal indicating higher virtue. This is one possible reason why married men tend to earn more than unmarried men. It may also explain a few social aspects of corporate and bureaucratic organizations generally overlooked by economists.

If seemingly virtuous behavior is rewarded, individual may invest in such behavior and in virtue. I apply Becker's [3] distinction between general and specific human capital, and develop a market for

seemingly virtuous behavior.

2. THE DEMAND FOR VIRTUE

Virtue, called V , can not 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. I am now analyzing the demand for an individual's seemingly virtuous behavior by another party, such as an employer. Assume $v = v(V)$ has a positive derivative, which means that seemingly virtuous behavior is likely to reflect real virtue. The employer may be basing such generalization on past experience.

V increases a worker's i productivity, as reflected in production function 2

(2) $Q = f(t_i, K, V_i)$, where Q is output, t time worker i spends at work, and K physical capital at work. The cross-derivatives of Q by t and V and 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 [4]) 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, and the statements above remind of some previous literature. Marxist economists, for instance, wrote about the value employers derive from a well-disciplined work force (Himmelweit and Mohun [5], Bowles [6]). Maital and Maital [7] consider cooperative workers as a benefit to firms. Ouchi [8] finds that loyalty enhances productivity in Japanese firms and Z-organizations in the U.S.

Employers are consequently willing to pay higher wages to more virtuous workers. Given the fact that virtue is not observable and that V and v are positively correlated, employers will be willing to pay higher wages to workers who display seemingly virtuous behavior.

A firm's demand for seemingly virtuous behavior is downward sloping if the marginal utility of V is diminishing. An aggregate demand for v by employers, the sum of individual demands, is depicted in Figure 1. I now discuss factors that could shift that demand.

Employers will demand more seemingly virtuous behavior the larger V 's contribution to productivity, and the more v is associated with V . In turn, V is more likely to be valuable to employers (a) in more

capital-intensive jobs, (b) when type of contract makes shirking more likely. For instance, if workers are paid by the hour shirking is more likely than if workers are paid by piece-rate (c) in large corporations or bureaucracies when it is easier for a worker to act as a free rider at the expense of fellow workers, (d) 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, (e) 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 [9]), and to the extent that emphasis on loyalty hinders creativity, (f) in less creative tasks (see Maital and Maital [7] p. 94 on innovation and corporate culture). The demand for v is also larger the more v is likely to vary positively with V . This is more likely if V is of a more general nature. Before this can be explained, let me give examples of seemingly virtuous behavior. Any human relation can serve as evidence of virtue. 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.

A candidate's observed family behavior often serves as a form of v playing an important role in hiring and promotion. Employers may investigate marital status, duration of marriage, marital fidelity, or number of children. Employers' preference for virtue and married men's higher virtue relatively to unmarried men is one possible explanation for the higher wages married workers have¹ been observed to receive, keeping standard wage determinants constant. 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. The men with higher incomes are more likely to be married (see Becker's [10] "Economics of Marriage".) The latter and the explanation based on virtue could also account for the fact that married women do not earn more than unmarried women.

The "economics of marriage" explanation is that women earning more are less likely to be married. The "seemingly virtuous" explanation for differential effects of marriage on men and women is that 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. This argument is pursued and gender asymmetry in individual preferences for commitment in marriage is documented in Grossbard-Shechtman [11].

The value employers place on seemingly virtuous behavior is expected to increase with worker's potential productivity. Therefore, 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% 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 [12]). In contrast, the father of an average child in that age group who would on the average be 40 years old in 1980 had approximately a 30 percent probability of having been divorced (Schoen et al., [13]). An alternative interpretation seems unconvincing. In principle, causality could run the other way: the high income earned by executive could increase the likelihood of marriage and reduce the likelihood of divorce. But men earning higher incomes have a higher tendency been found to divorce more often than men with average incomes. In particular, Becker, Landes, and Michael [14] 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 what was expected.

Family men (true and faking) also have an incentive to advertise their seemingly virtuous family behavior. Accordingly, Kanter [15] reports that in a large corporation pictures of wives and children adorned men's offices so commonly that they seemed almost mandatory.

The demand for seemingly virtuous behavior is expected to be higher in Japan, where tenure is expected to be larger. Accordingly, rewards to married workers seem more substantial in Japan than in the United States. For instance, although in the United States some doors close to unmarried candidates in the corporate and political world, that is very obviously the case in Japan where firms even act as marriage-brokers (Browning [16]).

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 [17], Morishima [18]). Their Confucian ideology stressing virtue benefited

their own advancement as well as that of Japanese industry.

Public employers are expected to value virtuous employees for the same reasons that they are valued by large corporations. 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 [19]). 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 space) seems to be rewarded in politics too. Finally, 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 loose 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 to appear as staunch defendants of the loftier parts of the official doctrines.

Spouses can also be viewed as each other's employers. Marriage markets of the kind analyzed by Becker [10] and Grossbard-Shechtman [22],[20],[21] establish wages for household 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 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 [7]).

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 system of behavior is applicable to other spheres, and the higher the demand for v

3. SUPPLY

3.1 Short Run Supply

At any given time t , an individual can engage in j kinds of seemingly virtuous activities. To the individual some or all v_{tj} 's may

be unrelated or negatively related to (the stock of) V . (What made v a positive function of V to the employer was a general trend based on past experience). As an example, a two-period utility function is presented in 3

$$(3) U = U_1[v_{11}(V), v_{12}(V), \dots, v_{1N}(V), x_1] + U_2[v_{21}(V), v_{22}(V), \dots, v_{2N}, x_2] \delta,$$

where δ is a discount factor and x_t market goods. Activity v_{tj} is work in period t . Other activities could be various forms of leisure or work performed for a spouse, as in Grossbard-Shechtman [22]. It is assumed that no activities are joint. The individual maximizes 3 subject to time constraint

$$(4) T_t = \sum_{j=1}^N v_{tj}, \text{ and a budget constraint 5}$$

$$(5) w_1 v_{11}(V) + w_2 (v_{11}, \dots, v_{1N}) v_{21}(V) / (1+r) = p_1 x_1 + p_2 x_2 / (1+r).$$

The first activity is assumed to be the only one generating income. The individual knows that his wage in period 2, w_2 , varies positively with past seemingly virtuous behavior. Consequently, he might invest in some activities v_{tj} with the sole purpose of increasing future wages, or he may engage in more such activity than he would based on its direct utility.

For example, individuals may get married in period one and display exemplary devotion to their family, thereby increasing their wage in period two. Some activities may be consciously chosen in period one in order to advertize one's potential for virtue. 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_{tj} 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 (e.g. religious) 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, fakers² may supply more of a given type of v_j than genuinely virtuous people.

The aggregate supply of time devoted to a particular seemingly virtuous activity is obtained by aggregating individual supplies.

3.2 Long Run Supply

The model could also be expanded to include investment in V . Virtue may be learned from experience. In that case the stock of V in period 2 would increase³ when the person engages in seemingly virtuous activities in period 1.

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 them⁴ or the concerned father analyzed by Becker in the Rotten Kid theorem).

Virtue can be acquired in various ways. Whether the mechanisms for value acquisition involve the intellect, feelings, actions, or a combination of these, is an issue beyond this paper's scope. In any case, deliberate exposure to other virtuous people seems like one possible desirable strategy which involves at least some learning-by-doing.

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 [23], for instance, report that when given freedom in job selection, workers tend to show signs of cognitive dissonance, i.e., they build beliefs whereby they perceive their work as safer than it actually is. Van Raaij [24] 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 [25] Christmas clubs and Schelling's [26] discussion of self-management. 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 [24] or, more relevant here, a group emphasizing virtue.

4. Market and State

A market for seemingly virtuous behavior v_j is generated when the demand for the v_j workers displayed in period 1⁵ by employers in period

two is juxtaposed to the supply by workers responding to rewards in period 2. For a given level of faking, in a market with a lot of seemingly virtuous workers, employers end up paying little extra for such workers. Where virtue is scarce, they pay a large bonus for workers who seem to be virtuous. If people become less virtuous over time, this would imply that the bonus to virtuous workers would increase. It is possible for example, as suggested by Charlotte Phelps, 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 Phelps [27] used in her own work, increased during those years. This would imply that the premium for marital stability would also have increased during those years.

The demand and the supply are not independent, since one of the factors shifting the demand is the percentage of fakers. The more fakers, the lower the demand and the more the supply shifts to the right, as engaging in v_j is very cheap to fakers.

One can construct separate markets for different kind 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, if it relies on volunteering, virtuous citizens with the necessary skills are more likely to volunteer to state institutions such as the army. To the extent that the state embodies the public good, a more virtuous citizenry will also increase the public good (Weisbrod [28], Hirshleifer [19], Maital and Maital [7], Guttman [29]). As a result, it is in the state's interest to promote virtue. The state can do this directly by taking an active role in educating and regulating the public. Alternatively, following this paper's basic argument, the state can encourage individual investments in virtue by emphasizing 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.

For instance, let us assume a given "stock" of virtue in the population, where a considerable part of that virtue is oriented towards in-groups such as specific families, firms, tribes, or religious groups. If such virtue lacks generality the potential benefits individuals can reap from acting virtuously are limited. 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 and the total stock of virtue will rise.

States have played a major role in increasing the generality of

virtue. One often used strategy 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. Historically, stronger national standards of virtue have often been promoted at the cost of emphasizing differences between the nation and the rest of the world. State religions and more recently fascist nationalistic ideologies such as nazism have frequently strengthened individual incentives to be helpful fellow citizens by instigating extreme forms of hatred towards groups defined as outsiders.

Besides generating repugnant by-products such as mass murder of minorities or wars, institutionalized religions and nationalism have often been detrimental to individual well-being due to beliefs, laws, and policies impeding economic growth. It is therefore difficult to use comparative data to test the hypothesis that states can benefit economically by standardizing the criteria for virtue accepted by their citizens. Nevertheless, I find that 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 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 examples of industrial revolution, are islands in which more of a distinctive national character had developed than in the adjacent mainland. This enabled more investment in virtue, and consequently more economic growth.

As to the United States' economic success, among its characteristics one may count the fact that it is not confined to the fifty states of the union (most multinational corporations originated in the United States) or to a relatively uniform ethnic-national-religious group. These pluralistic aspects of the American economy are related to the open nature of the basic standards for individual virtue promoted in the American Constitution and other institutions central to the United States.

5. Summary

Employers appreciate virtue in workers and are willing to pay a bonus or promote workers who seem to be virtuous. 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 behavior specifically good for a particular group, (2) a list of the determinants of seemingly virtuous behavior, (3) the idea of investment in virtue, and (4) implications for public policy.

FOOTNOTES

*I am indebted to Joel Guttman for stimulating my interest in this paper, 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 and to Maureen McDonnell for skillful typing.

1. For more on the relation between marriage and productivity at work, see Grossbard-Shechtman [30].
2. To these hypocrits 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 give for the biblical commandments that men get married and be nice to their wife during the first year of marriage. Note that women are not commanded to get married.
4. These kinds of locus of control have been introduced by Rotter [31]. Becker's [32] 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 [27].

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