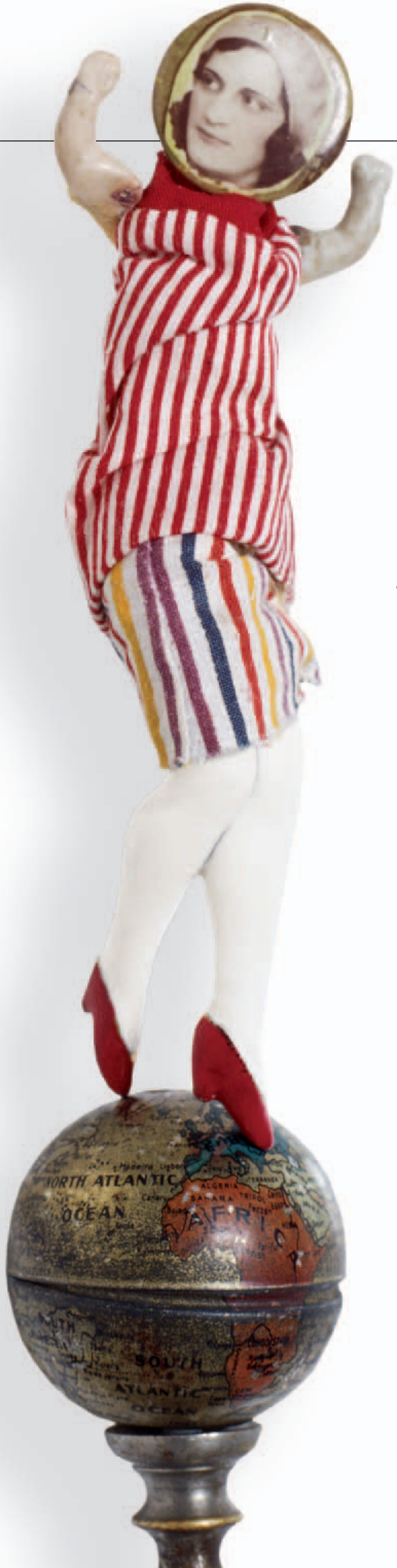


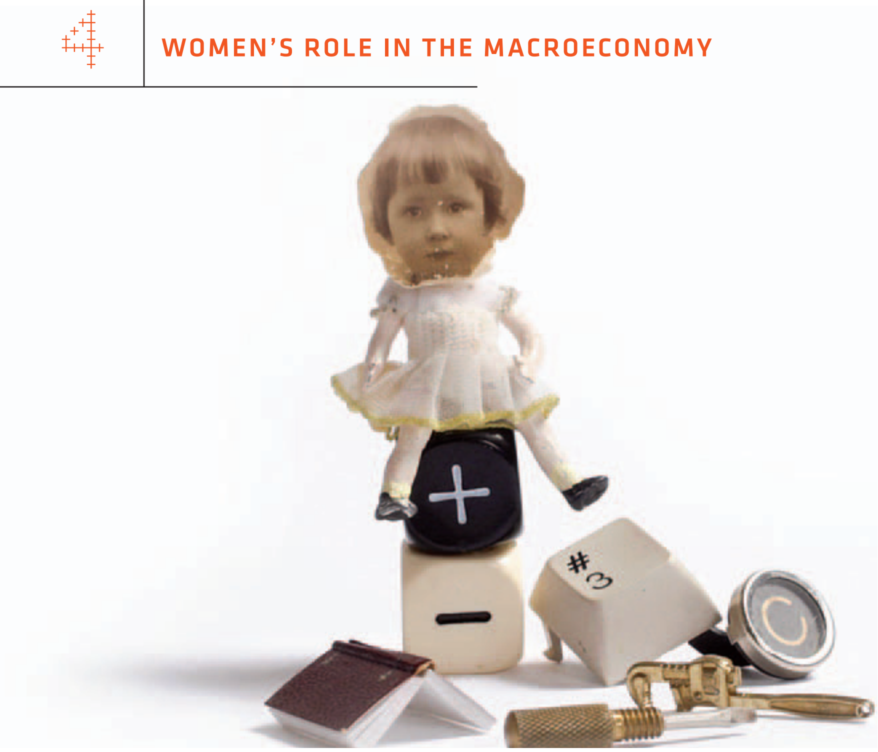
by NANCY FOLBRE

gender, competition, and the long-run optimum

spinning the top

Reaching the top, the theme of this conference, seems like an excellent goal. Still, it is useful to consider more carefully what constitutes the top and in which direction the top lies. "Up" is perhaps the obvious answer. But as any mountaineer can tell you, the path to the summit often winds around many smaller peaks. Or, in mathematical terms (the preferred currency of the economics profession), a local maximum is not necessarily a global maximum.

It may seem implausible to many highly skilled professionals that aspirations to top management in a *Fortune* 500 company could represent less than a global maximum. But that is the conclusion to which this article leads. Although existing organizational and cultural practices have the benefit



Women who enter "male" occupations enjoy a positive payoff in the labor market, but may find themselves at a disadvantage in the dating market

of creating incentives to increase output, they may also create perverse incentives that have negative economic effects outside the relatively easily measured world of market outcomes.

I was asked to address two questions: Do existing organizational and cultural practices have a productivity payoff? And, does the *status quo* reduce national production and income? The answers depend entirely on how national production and income are defined. Efforts to assign a monetary value to nonmarket activities, such as child care, volunteer work, and, more broadly, the intrinsic value of human capabilities, profoundly modify our economic accounts. Thus, while it is important to ask how to improve women's chances of success within our current institutional environment, my goal is different. I argue that women should play a leadership role in redefining our measures of success.

The impact of gender norms

In *Liar's Poker*, his vivid account of working for Salomon Brothers in the 1980s, Michael Lewis describes the challenges facing a new employee who is handed a pair of telephones on the trading floor: "If he would make millions of dollars come out of those phones, he became that most revered of all species, a Big Swinging Dick." Everybody wanted to be a Big Swinging Dick, Lewis explains, "even the women." Yet, his next anecdote details the humiliation of a female trainee.

In management, as in other fields, considerable debate centers on the similarities and differences between men and women. It is an irritating debate, sometimes making us feel as though we are being boiled down to a binary gender assignation. Few of us want to choose between simplistic me-too-ism ("Girls can do anything boys can do") and sarcastic self-righteousness ("Women who want to be like men lack ambition"). The debate becomes more interesting if we back off from simple polarity, acknowledge a multidimensional continuum between masculinity and femininity, and ask how we might be nudged in different directions along it, and why.

Femininity and masculinity are rather abstract concepts. And they certainly may change over time. But in the short run, one way they are reinforced is through the labor and dating markets, where those who don't conform may pay a penalty. In research on labor market outcomes for gays, lesbians, and heterosexual counterparts with similar levels of education and experience, my colleague Lee Badgett learned that while gay men pay a wage penalty, lesbian women seem to enjoy a slight wage advantage. They seem to be more willing than heterosexual women to enter nontraditional occupations (gay men likewise, but nontraditional occupations for men generally promise lower, not higher earnings).

One reason: a nontraditional occupation may impose costs in the dating and marriage market. Austrian economist Doris Weichselbaumer conducted an interesting experiment using the personal ads published in a free newspaper in western Massachusetts. She placed ads by two fictional white females who differed only in the gender conformity of their occupation, one a nurse, the other an electrician:

> SWF, 31, good looking, slender nurse. Enjoys x-country skiing and films. Financially stable. Would like to meet a man for a lasting relationship.

> SWF, slim, attractive, electrician, 30, financially stable, likes movies and rollerblading, seeks man for lasting relationship.

The ads ran for five weeks. The nurse received 77 responses, the electrician 39. Apparently, violating gender norms has some negative consequences in the dating market.

Badgett and I explored this further by asking groups of college students to rate 10 similar personal vignettes that randomly varied characteristics such as occupation. We found that (controlling for status, education, and other factors) a woman in a gender-nonconforming occupation is likely to face a reduced pool of potential suitors. The penalties for women are lower in nontraditional jobs that require substantial education or offer relatively high status—a female orthopedic surgeon, for instance, is penalized less than a female electrician. Men in gender-atypical occupations are also considered less attractive—but their earnings power matters more than their gender conformity.

This suggests that men who invest in market-oriented human capital enjoy two positive payoffs—one in the labor market and one in the dating market. Women enjoy a positive payoff in the labor market if they enter an "unfeminine" occupation (though it may be decreased by discrimination), but their payoff in the dating market is much reduced. It is as though men are competing in two races that require similar training (e.g., the general aerobic conditioning that contributes to success in running a 15K race and a marathon), while women are competing in two races that require different training (e.g., a sprinter's 100 yard dash and a marathon). It is no wonder that we describe women who combine family and highly successful careers as "superwomen."

Public policies to promote better work-family balance might make it easier for these women to succeed. But our research suggests that the gender inequality we observe may have deeper sources than the absence of paid maternity leave, or limits to the length of the working day. It may also stem in part from cultural norms of masculinity and femininity that place women at a disadvantage. And it is difficult to explain why women would conform to such costly norms without looking more closely at possible differences in men's and women's preferences.

Gender and preferences

Economists tend to sidestep questions about preferences. Yet, common sense suggests not only that it is harder for women than for men to "have it all," but also that women may want more than men to "have it all." Thus, it is worth considering the possibility that when it comes to children, women have more expensive preferences than men.

Such a hypothesis is consistent with a number of the insights of evolutionary biology. Differences in the size and quantity of gametes produced by males and females, combined with the physiological cost of carrying, nursing, and nurturing children, have significant implications for the way preferences may have evolved. Mothers have invested more in individual offspring and have more to lose (in terms of the long-term survival prospects of their genes) from the loss of a child than fathers. Similarly, women lose their reproductive capacity at a younger age than men, and mothers bond more closely and more quickly with offspring than do fathers. Thus, fathers are in a stronger position than mothers to credibly threaten to abandon their children.

A different set of evolutionary pressures operates on males and females. Natural selection rewards males who improve their mating effort by increasing their sexual access to females. It rewards females who increase their parenting effort by improving the likelihood that their children will reach maturity, including bargaining with males for greater support of children. In other words, many centuries of evolution may have favored females who are more willing than males to sacrifice some of their own consumption and leisure on behalf of their children.

These evolutionary pressures may also have implications for

Valuing nonmarket work *The battle to measure work in the home*

The battle to measure and value nonmarket work has a long and fascinating history, punctuated by protests from women's groups. My favorite example is a letter sent to Congress by the Association for the Advancement of Women in 1878, complaining of the Census Bureau's failure to acknowledge the productive value of the home and woman as home-keeper. The letter failed to sway federal legislators, but presented a point of view shared by the Massachusetts Bureau of Labor Statistics, which began collecting data in 1865 on the number of adults engaged primarily in housework. A few men (less than 1 percent) fell into this category, and the small number of married women who engaged in neither paid nor unpaid work were categorized as "wives, merely ornamental."

The English economist Alfred Marshall advised census-takers in Britain to adopt the practice of terming married women "dependents" and excluding them from estimates of the labor force, because this would make Britain appear to be more productive. Despite shifts to this terminology, early national income accountants tended to argue that household services represented productive work. In 1921, the National Bureau of Economic Research published a landmark study of income in the United States that calculated the value of household services based on estimates of the number of women ages 16+ primarily engaged in housework without monetary remuneration. Assuming that the proportion of "housewives" to the total population remained constant, and that the average value of their services in 1909 was about equal to the average income of persons engaged in the paid occupation of Domestic and Personal Service, they calculated that the value of housewives' services amounted to 31 percent of market national income in 1909 and 25 percent in 1918.

Within universities, the emerging field of "home economics" created a platform for research on such topics. The first surveys in the United States that used time diaries were administered to small samples of farm wives in the 1920s. National income accounting, however, moved in a different direction. The economist A.C. Pigou insisted that national income should be defined only in terms of goods and services that could be brought "directly or indirectly into relation with the measuring rod of money," and discouraged the application of such a measuring rod to household work.

In the early 1930s, two women economists published comprehensive studies of the economics of household production. But it was not until the 1990s, under pressure from women's groups, that most countries moved toward making serious efforts to measure the value of nonmarket work.

the broader development of male and female capabilities and preferences. Physical strength becomes an advantage for males in competition with other males. Selection for mating effort tends to place males in "winner-take-all" games that reward risk-taking behavior. If they fail to mate, helping to nurture offspring becomes irrelevant. Selection for parental effort places females in strategic environments more likely to reward cooperation. Unlike men who face a shortage of potential partners, women face substantial long-term risks of being unable to raise children to maturity. As a result, men and women may have evolved propensities to behave somewhat differently even with similar environments.

This concept of gendered preferences is also consistent with experimental evidence. In carefully controlled laboratory settings in which participants play games with real money payoffs, women behave in more generous and more risk-averse ways than men. Women are particularly cooperative when paired with another woman. Other experiments that compare the productivity of men and women under different systems of compensation (piece rates, competition in which only the relative position matters—that is, the winner enjoys a large premium while the loser receives little) find that men and women are about equally productive under a piece-rate system, but that men try harder and are more productive if payments are competitive, perhaps as a result of greater confidence in their potential success.

Many more experiments of this type will be required to persuade me that these differences are truly important in explaining daily life. But I am intrigued by the thought experiment. What if it were true that women tended to be less competitive than men? Should we try to change our preferences (and those of our daughters) and not just try to behave but also to feel more like men? Or would society lose something important—including a chance to reconsider the role of competition in the economy?

Too much competition?

In the world of neoclassical economics, competition rewards those who successfully pursue their own self-interest. At the macro level, everyone benefits from the increased output that results from the alignment of incentives and rewards. Competition is generally viewed in the same short-run terms as what evolutionary biologists describe as male preoccupation with "mating success." It is often remote from the longer-run benefits of rearing the next generation, or what evolutionary biologists describe as "parenting success."

While competitive pressure is a useful device for encouraging positive economic outcomes, I would like to suggest that more competitive pressure is not always better. Rather, the relationship between competitive pressure and positive economic outcomes may be positive up to a point, but after that the costs may outweigh the benefits. Moreover, there is little reason to believe that our current economic institutions situate us at the right level. Indeed, while other economic systems may suffer from insufficient competition, we may suffer from too much.

Thomas Schelling, a great innovator in strategic modeling, was fond of what he called the "inexorable mathematics of musical chairs" as a way of exploring and understanding the relationship between intensity of competition and economic outcomes. In musical chairs, individuals parade around a group of chairs as music plays. When the music stops, they must sit in a chair. Those who fail are eliminated from the game; but for every person eliminated, a chair is also removed. In the final round, two persons compete for a single chair.

Imagine that individuals are doing something economically productive rather than simply parading to music. The competitive structure of the game urges them to pay close attention and try as hard as they can to grab a chair when the music stops, subject to the requirements of common courtesy. The intensity of the competition is determined partly by the number of players relative to the number of chairs, and partly by the cost of losing. When the stakes are low, the game is lighthearted. But if those who grab chairs are guaranteed lifetime job security while the others are relegated permanently to the unemployment line, the competition can become intense.

Increasing the number of competitors and the relative level of the reward does not always lead to more positive economic outcomes. It is not difficult to imagine a situation in which, if the stakes became too high, individuals would be tempted to violate common courtesy and engage in kicking, shoving, pinching, and eye-gouging. One can even imagine embittered players strapping on explosives in order to blow up the chairs. Much depends on how effectively the rules and civility of the game can be enforced. But holding these constant, increasing the intensity of competition is likely at some point to lead to declining benefits, perhaps even to costs.

One real-world example is in the use of steroids and other performance-enhancing drugs in competitive sports. Such drugs pose serious long-term but uncertain health risks, yet the short-run pressures to use them are enormous—as are the rewards of winning. Without regulation and strict enforcement of rules, drug use can become endemic with an increase in the

further reading

Family Time: The Social Organization of Care, edited by Michael Bittman and Nancy Folbre, Routledge, 2004.

"Contracting for Care," by Paula England and Nancy Folbre, in Marianne A. Ferber and Julie A. Nelson (eds.), *Feminist Economics Today: Beyond Economic Man*, University of Chicago Press, 2003.

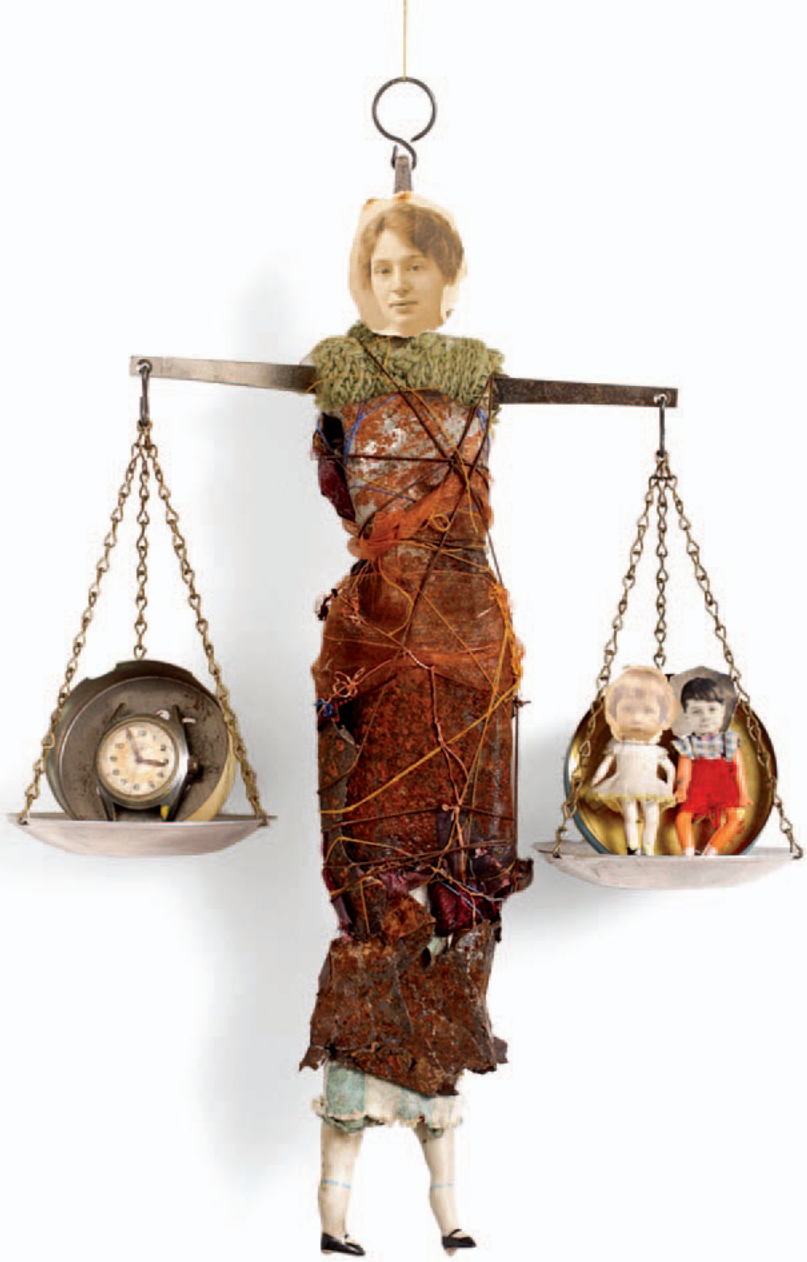
The Winner-Take-All Society, by Robert H. Frank and Philip J. Cook, Penguin, 1996.

attendant health risks to all players—even as the fact that everyone is using them neutralizes the competitive benefit any one person would have achieved.

In the modern economy, Robert Frank offers a compelling account in which information technology has increased the prevalence of high stakes, winner-take-all tournaments—and the adverse consequences that can arise from them. He notes that the tendency of people to evaluate their welfare in relative terms and to overestimate their chances of success in competition results in people allocating more effort to winning than is justified by the potential social benefits. Frank urges us to think less about individual performance within a given competitive game, and more about the design of the game itself.

Bringing the discussion back to the subject of this conference, many high-paying professional careers, including those of managers, lawyers, and top-level academics, are conducted like winner-take-all tournaments. As a result, both men and women often face a high price for devoting time to family and community, even if they have legal access to parental or family leave. As Tipper and Al Gore put it, "At any given moment when the decision between work and family must be made, the workplace has a much stronger ability to quantify and express the immediate cost of neglecting work." Like resorting to steroids, working long hours is a competitive strategy that offers no individual advantage if everyone adopts it. And it can lead to a serious misallocation of time away from family and community.

Another example of the negative impact of excessive competition comes from the corporate accounting scandals of the last few years. Forms of executive compensation that were thought



"...when the decision between work and family must be made, the workplace has a much stronger ability to quantify and express the immediate cost of neglecting work"

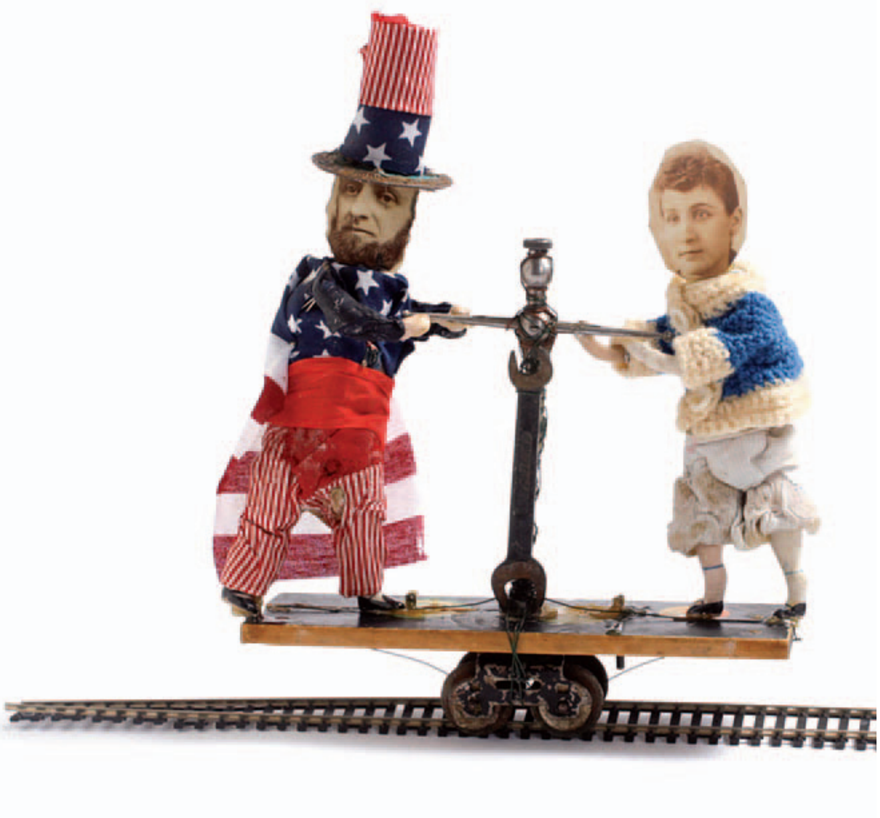
to represent "optimal contracts" proved distinctly suboptimal because they encouraged cheating and opportunism. Although I know of no systematic analysis of gender differences in such behavior, it has been noted that women were well represented among the key whistle-blowers. At the same time, women who engaged in suspicious behavior were generally held to a higher standard and were subject to more public criticism than men. Martha Stewart is the classic example—last year she appeared on the cover of *Atlantic Monthly* as a witch being burned at the stake.

The care sector

The optimal level of competitive pressure may vary in different economic contexts. It is probably lowest in the traditionally feminine "care sector" of the economy that includes the paid and unpaid work of caring for dependents, and highest in the more traditionally masculine "physical output" sector of the economy where goods are easily substitutable, and quantity and quality are more easily measured and monitored. In addition, some types of work, such as child care, nursing, and teaching, have intrinsic characteristics that make it difficult to rely on competition as a motivational device.

Empirical research could also help clarify the different effects of competitive pressure. It could reveal differences in propensities to violate the "rules of the game" and how they are affected by factors such as consumer choice, institutional transparency, monitoring costs, substitutability of inputs, and measurement of output.

For all the media attention devoted to corporate scandal, there has been remarkably little focus on such questions as who bears the costs when cheating and malfeasance become endemic. Any infractions of the rules, such as those governing



More competitive pressure is not always better; and while other economic systems may suffer from insufficient economic competition, we may suffer from too much

insider trading or mutual fund transactions, undermines investor confidence. But the costs are almost certainly higher when large numbers of workers and consumers are adversely affected. In this area, the poster child for misbehavior is not Enron, or Putnam, but Tenet Healthcare, the nation's second-largest for-profit hospital chain: In 1997, following a chain of lawsuits in which they admitted to defrauding both insurance companies and the federal government, Tenet agreed to pay $100 million to about 700 former patients for illegally imprisoning them in psychiatric hospitals to obtain their insurance benefits.

If consumers know what they want, have perfect information, have adequate economic resources (or opportunities to acquire them), and are offered a range of choices, they can be expected to make the best decisions for themselves. But in sectors of the economy such as health, education, and nursing homes, these conditions are very hard to deliver. The problem is not lack of information, but its excess and complexity. And many consumers in the care sector are too sick, young, feeble, powerless, or poor to effectively evaluate their choices.

Even beyond issues of information and consumer choice, there is another question: Can we measure the outcomes that matter? The process of caring for dependents has complex emotional and personal dimensions, and includes many non-cognitive inputs and outputs that are difficult to quantify. The job of a health-care provider is not merely to cure an illness, but also to promote health. The job of a teacher is not merely to improve test scores, but also to encourage a love of learning. The job of an elder-care worker is not merely to prevent bedsores, but also to make patients feel cared for. Incentives to improve performance in the measurable dimensions of these tasks can have the effect of reallocating effort away from those that are less easily measured.

Along similar lines, the care sector of the economy encompasses unpaid work in the home. Much of this could be replaced by the purchase of services—housekeepers, gardeners, nannies—with wages determined by the forces of supply and demand in competitive markets. But hired help do not typically provide good substitutes for personal commitments and family-specific skills.

Social scientists have been known to suggest that parenting could be rationalized and made more efficient by offering self-interested incentives. James Coleman argues that parents should enjoy a public reward based on a calculation of how much better their children perform than might be expected based on their objective characteristics. Shirley Burggraf argues that instead of taxing the younger generation as a whole to support the elderly, we should give parents a legal claim to a percentage of their children's earnings. Would daughters then become less desirable than sons, because they earn less?

Apart from the pathology of thinking about children in such instrumental terms, the "quality" of children cannot be reduced to measures of their future earnings. Families don't merely produce "human capital." They also produce human capabilities of much greater and more intangible worth. Every child is helplessly and powerfully unique. As the Texas populist Jim Hightower puts it, "It's easier to count the seeds in the apple than the apples in the seed."

All these factors are relevant to a consideration of the optimal level of competitive pressure in the economy and to efforts to derive better estimates of the value of care services provided outside the market.

Accounting for care

National income accountants don't get nearly as much scrutiny as corporate accountants these days. One could argue that national accounts matter less, because they are not informing decisions to buy and sell. But political regimes compete on the basis of certain measures, among them the rate of growth of GDP. And national income accounts provide basic benchmarks for the measurement of economic success.

But these measures of economic success exclude consideration of the value of nonmarket work. Imagine a corporation or a nonprofit firm that benefits from a large supply of volunteer labor. If the supply of this volunteer labor changes over time, it is altering the relationship between priced inputs and outputs. This is why many organizations treat volunteer labor as an in-kind contribution and estimate its cost.

The movement of women into paid employment is one of the most significant trends of the twentieth century. When women reallocate their time and energy from home and family care to paid employment, they move from traditionally unmeasured into measured activities. This movement across the accounting boundaries probably overstates the rate of economic growth and misrepresents levels of economic welfare. Many countries, including the United States, are developing additions to their conventional national accounts to address this problem. These are termed "satellite" accounts because they are added onto the existing accounts, which remain intact.

The strategy adopted by most countries for measuring nonmarket work is to measure the inputs of time, using time-diary surveys of a representative sample of the population. Then the inputs of time are multiplied by the wage that would be paid if someone were hired to do work of comparable quality, or alternatively by the wage the person providing the service would have received in his or her market profession. Results from Australia, Canada, Finland, Norway, Sweden, and the United States show that, even when using the first method, nonmarket activities account for a sizeable proportion (between 40 percent and 60 percent) of the value of all output.

Yet, a number of thorny measurement and conceptual problems remain. I have had the honor of participating on a panel convened by the National Academy of Sciences to consider how best to assign a value to nonmarket work and health. In general, we found it easy to agree on methods of valuing nonmarket work that have obvious market substitutes, such as cooking and cleaning. More serious problems emerge in consideration of more personal forms of work, such as family care. For instance, time-use diaries capture the *activity* of caring for children better than the more diffuse *responsibilities* for child care, which often constrain parents' activities.

But these problems (though daunting) are small compared to more conceptual ones. Time devoted to the care of children and other dependents can be treated simply as a form of "consumption" and valued at what it would cost to hire someone else to provide the service. But as the metaphor of "investment in human capital" suggests, we could also value the activity from the other direction—measuring the net present discounted flow of services from the capital asset.

Who produces human capital?

Despite widespread rhetorical use of the term "human capital," economists continue to interpret it narrowly. It is often assumed that the actual physical production of children, along with their early nurturance, is not an economic activity and only formal education counts as an investment in human capital. Yet a growing literature documents the significant influence of early childhood experiences on both motivation and the acquisition of cognitive skills later in life.

In addition, economists typically estimate the value of human capital as the net present discounted value of future lifetime earnings—even though the services that children provide cannot be reduced to earnings. After all, by this measure, a daughter is worth less than a son, and neither Jesus nor Van Gogh was worth much, since they enjoyed no commercial success in their lifetimes. The capabilities that children develop have profound implications for our own sense of fulfillment, for our ability to govern ourselves, and for our ability to respond to the unforeseen challenges of the future. In technical terms, they have many "spillover" effects, "externalities" that are not captured by market valuation.

I have long argued that our public policies redistribute resources from parents in general (and mothers in particular) to nonparents. We have "socialized" the economic benefits of childrearing more extensively than we have socialized the costs. Fertility decline has provided important economic benefits. But reductions in the time and energy devoted to the next generation, like competitive pressure (and perhaps as a result of it), can go too far.

Conclusion

Women may have different norms and preferences than men because we have had different responsibilities—differences that may be based to some extent in biology as well as culture. We have attained the power to change both biology and culture, along with the very meaning of femininity. And we have changed that meaning, for the most part, in positive ways. But in doing so, we may have entered a game in which we are offered a choice between adopting traditionally masculine priorities and being denied access to the "top." If we focus too narrowly on the optimal strategy of individual choice, we will lose our collective opportunity to change the rules of the game.

Rather, we need to develop ways of controlling competitive pressures in the economy lest they weaken families, communities, and the long-run sustainability of our economy and society as a whole. We need to think more carefully about the institutional organization of the paid care sector of the economy, providing more guarantees of high-quality care for children, the sick, and the elderly. And we need to move beyond the margins of conventional economic theory to develop better social accounting systems. If we don't, we may reach the top of the mountain only to see it crumble beneath us. ❊

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