

ADVANCED READING

PASSAGE 1

Comparable worth is a concept that rejects the premise of a separate and lower wage hierarchy for jobs that are done primarily by women, arguing instead that earnings should reflect only the worth of the work performed. This worth should be determined by an evaluation system that rates jobs according to their social importance and skill requirements. Because comparable worth does not attack all forms of inequality, it can have only a modest direct effect on the overall degree of inequality in society, but in attacking gender inequality in the job classification system it attacks a major component of gender inequality in the United States. The likelihood that other forms of inequality will become more manifest with the lessening of gender inequality is not a valid argument against comparable worth. Indeed, struggles for comparable worth may help launch campaigns against similar forms of inequity. Still, while conservatives have battled hard against comparable worth, radicals have been reluctant to fight for it because they see the narrow presentations in comparable worth litigation as the limits of the concept. But in addition to helping redress particular inequities, comparable worth could open a discussion of the entire wage system. Its theoretical and political impact will reach far beyond the framework in which it was conceived and force a rethinking of assumptions underlying current employment practices and the market itself.

How comparable worth will affect the hierarchy of wages is more difficult to foresee. It does not directly challenge the concept of a hierarchy; in fact, its insistence that jobs must be evaluated implies a hierarchy. However, its rejection of the market as an adequate basis for determining wages initiates a discussion of how value should be assigned to jobs. Advocates of comparable worth have challenged prevailing standards of evaluation, which stem from formal job evaluations first developed in industrial settings. These evaluations, based on points awarded for different job tasks, gave considerable emphasis to such activities as strenuous lifting and the operation of expensive equipment. Consequently, the skills and knowledge more typical of work done by women are less heavily emphasized. The 'Dictionary of Occupational Titles' reveals numerous current instances of such imbalance in job ratings.

While comparable-worth advocates accept the principle of a hierarchy of wages, arguing only that they seek more objective measures of job worth, the issues they raise provoke a broader debate. This debate does not, as the opponents have claimed, concern the feasibility of setting up and applying evaluative standards. Employers have done that for centuries. Rather, the debate is about the social values and priorities underlying the wage hierarchy and, ultimately, the market where age-old conventions and political, as opposed to purely economic, forces enter the process of setting wages..

PASSAGE 2

Historians have long thought that America was, from the beginning, profoundly influenced by the Lockean notion of liberty, with its strong emphasis on individual rights and self-interest. Yet in his recent book, historian J. G. A. Pocock argues that early American culture was actually rooted in the writings of Machiavelli, not Locke. The implications of this substitution are important: if Pocock's argument is right, then Americans may not be as deeply individualistic and capitalistic as many believe.

Pocock argues that out of the writings of antiquity Machiavelli created a body of political thinking called "classical republicanism." This body of thought revived the ancient belief that a human being was by nature a citizen who achieved moral fulfillment by participating in a self-governing republic. Liberty was interpreted as a condition that is realized when people are virtuous and are willing to sacrifice their individual interests for the sake of the community. To be completely virtuous, people had to be independent and free of the petty interests of the marketplace. The greatest enemy of virtue was commerce. This classical republican tradition is said by Pocock to have shaped the ideology of America during the eighteenth century.

Many events in early American history can be reinterpreted in light of Pocock's analysis. Jefferson is no longer seen as a progressive reader of Locke leading America into its individualistic future; instead Jefferson is understood as a figure obsessed with virtue and corruption and fearful of new commercial developments. Influenced by Pocock, some historians have even argued that a communitarian and precapitalist mentality was pervasive among the eighteenth-century farmers of America.

Yet Pocock's thesis and the reinterpretation of the history of eighteenth-century America engendered by it are of dubious validity. If Americans did believe in the ideals of classical virtue that stressed civic duty and made the whole community greater than its discrete parts, then why did the colonists lack a sense of obligation to support the greater good of the British Empire? If indeed America has not always been the society of individual rights and self-interest that it is today, how and when did it become so? Classical republicanism is elitist, and it certainly had little to offer the important new social groups of artisans and shopkeepers that emerged in America during the eighteenth century. These middle-class radicals, for whom John Wilkes and Thomas Paine were spokesmen, had none of the independence from the market that the landed gentry had. They were less concerned with virtue and community than they were with equality and private rights. They hated political privilege and wanted freedom from an elite-dominated state. In short, the United States was created not in a mood of classical anxiety over virtue and corruption, but in a mood of liberal optimism over individual profits and prosperity.

PASSAGE 3

Astrophysicists wrestling with the study of a new kind of star, the flat, "two-dimensional" configurations known as accretion disks have recently gained new insights into the behavior of these stars. Accretion disks exist in a variety of situations where matters swirl around a compact star such as a white dwarf star or a neutron star. Accretion disks are also suspected of playing a part in more exotic situations, in which the central object is imagined to be a supermassive black hole, the ultimate form of collapsed matter, rather than a compact star. The modeling of accretion disks is still in its infancy, a situation analogous to the days when ordinary stars were modeled by using elementary scaling laws without benefit of knowledge of the nuclear processes that power the stars. Similarly, the basic physics of the power by which accretion disks radiate, thought to originate in a form of turbulent friction, is known only at the crudest level.

Accretion disks were first defined in the context of Cataclysmic variables. In these systems, matter from the outer layers of an ordinary star is attracted by the gravitational influence of a nearby orbiting white dwarf star, the matter lost from the ordinary star cannot strike the surface of the tiny white dwarf directly but settles into an orbit around the star. The viscosity in the disk thus formed causes heating, radiation, and a slow spiraling of disk matter onto the surface of the white dwarf.

The rapid advances made in x-ray astronomy in the past decade have identified a second type of system in which accretion disks occur. In such a system, an accretion disk whirls about a neutron star rather than a white dwarf. The inner reaches of the accretion disk extend deeply into the gravitational potential of the neutron star where very rapid motion is the rule. The energy released by friction and the actual raining of the material from the disk onto the surface of the neutron star is so great that radiation is given off in a powerful flood of x-rays. And in at least one case, x-ray astronomers believe that the object in the center of an accretion disk is a black hole, suggesting that a third system may exist.

It had been assumed that portions of accretion disks would be unstable and that, as a result, clumping of their matter into rings would occur. There is no evidence from observation, however, that accretion disks do, in fact, suffer from these instabilities. In recent work, Abramowicz has shown that added gravitational effects due to general relativity may alter the expected Newtonian gravitational relationships in such a way that the disk remains stable, indicating that it is possible that these predicted instabilities do not occur.

Further progress toward understanding accretion disks will involve defining and proposing solutions to restricted problems just as was done in this case and was done and continues to be done for ordinary stars. Abramowicz' work is a valuable example of the care that must be taken before reaching conclusions regarding accretion disks.