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HUMAN CAPITAL AND SOCIAL WORK

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ABSTRACT

This article is an update and continuation of Theodore Schultz's seminal, but largely unheeded, 1959 article on human capital. Like Schultz, we suggest that building human capital should be a key development strategy for social workers. Empirical research demonstrates that human capital has important positive outcomes. However, opportunities for human capital development are not equally accessible to all. By facilitating human capital development among disadvantaged groups, social workers can help individuals obtain skills that will enable them to compete in post-industrial labor markets. This emphasis on investment and development is particularly relevant today since, in the current political climate, there is declining support for residual and consumption-oriented interventions. After documenting outcomes from human capital and differential opportunities for human capital development, we offer suggestions for facilitating human capital among low-income groups.

“The most valuable of all capital is that invested in human beings.”

--Alfred Marshall, *Principles of Economics*

The past two decades have witnessed a dramatic rise in earnings inequality, a trend closely related to differences in educational attainment. In general, those with a college degree have experienced increases in real wages, while those with less education have experienced stagnant or declining real wages. This trend by itself provides sufficient rationale for social workers to devote more attention to human capital issues, but there are other reasons as well. By facilitating a wide range of positive economic, personal, and intergenerational outcomes, human capital contributes broadly to social welfare, and, in the aggregate, it contributes to economic development. Most importantly for social workers, opportunities for human capital development are not equally accessible to all.

With these issues in mind, investments in human capital should be considered a key development strategy. By facilitating human capital development among disadvantaged groups, social workers can promote improvements in social welfare for large and diverse populations. This integration of social welfare with economic development is particularly important given the current political climate in the U.S. and in many other developed countries. Conservative political forces have begun to destroy the normative basis for the welfare state, and those who are concerned about social welfare must adopt new political strategies (see, e.g., Midgley, 1994). In the current climate, developmental approaches are likely to have greater political appeal than residual and consumption-oriented interventions.

HUMAN CAPITAL DEFINED

The notion of human capital is an extension of financial capital and refers to an individual's skills, knowledge, experience, creativity, motivation, health, and so forth (Becker,

1993). Like other forms of “capital,” human capital is expected to have future payoffs, frequently in the form of individual employment opportunities, earnings, and productivity in market and non-market sectors. Resources allocated to the augmentation of human capital--whether “financed” by an individual, a family, a firm, or a government--are therefore viewed as *investments* (Blaug, 1976; Mincer, 1989). Human capital differs from non-human wealth because individuals cannot be separated from their knowledge, skills, and other individual attributes (Becker, 1993). In other words, people use their human capital, but they do not use it up.

The conceptualization of skills, knowledge, and experience as forms of capital may be attributed to economists such as Theodore W. Schultz (1959; 1961; 1962), Gary S. Becker (1962; 1964), and Jacob Mincer (1962). Since the mid-1950s, human capital has been the object of considerable interest among economists, as an explanation of both macro and micro economic development. A key focus has been the private and social rates of return to different groups from investments in education. The standard empirical proxy for human capital has been years of formal education, but some scholars, notably Mincer (1974), have considered on-the-job training and experience. Sociologists have also devoted attention to human capital, particularly regarding the role of education in status attainment and social stratification (see, e.g., Blau & Duncan, 1967; Sewell, Haller & Ohlendorf, 1970; Sewell, Haller & Portes, 1969; Sewell & Hauser, 1975). In contrast, although many social workers are employed in educational, training, and job placement settings, social work researchers have given little attention to the developmental potential of human capital.¹

¹ Some exceptions are Beverly and Sherraden (1997), Else and Raheim (1992), Livermore (1996), Midgley (1995), and Raheim (1997).

THE RELEVANCE OF HUMAN CAPITAL TO THE FIELD OF SOCIAL WORK

As suggested almost four decades ago by Schultz (1959), the notion of human capital is directly relevant to the field of social work. Social workers who advocate for and implement investments in human capital can facilitate improvements in the well-being of low-income populations. Investment in human capital represents a broad social development strategy,² a welcome complement to the remedial and maintenance-oriented approaches common to social work.

Human Capital and Social Welfare

According to Midgley (1995, p. 14), social welfare (or well-being) may be assessed by examining the degree to which social problems are managed, needs are met, and opportunities for advancement are provided. Human capital reflects the second and third components of this definition of social welfare. In almost all societies, the ability of individuals to meet their own needs and the needs of their families is strongly affected by their human capital. In many societies, human capital is also a key determinant of opportunities for occupational advancement and other types of personal development. There is abundant empirical evidence identifying positive outcomes associated with human capital.³

Labor Market Outcomes

Human capital has important effects on labor market outcomes such as employment, wages, and fringe benefits. Clearly, in industrial and post-industrial societies, more highly educated individuals tend to attain higher occupational status or prestige, and both education and

²According to Midgley (1995), social development is characterized by the integration of social and economic processes and the promotion of the social welfare of all. At the same time, social development is “particularly concerned with those who are neglected by economic growth or excluded from development” (p. 27).

occupational attainment are associated with higher incomes (see Appendix A). Similar relationships exist in developing countries. Those with more education and skills are likely to find it easier to meet their own and their families' basic needs, whether directly through crop production or indirectly through earnings or farm profit (Jamison & Lau, 1982; Jamison & Moock, 1984; Lockheed, Jamison & Lau, 1980; Welch, 1970).⁴

There are three primary explanations for the relationships between human capital and labor market outcomes. The conventional explanation is that schooling raises labor productivity by increasing cognitive abilities (see, e.g., Becker, 1993; Welch, 1970). For example, schooling is expected to provide basic literacy and numeracy skills and, later, technical knowledge and greater capacities for logical and analytical reasoning and self-expression (Colclough, 1982). Individuals who have this body of knowledge and skills, according to conventional theory, are more effective and efficient workers and therefore receive higher earnings.

Others (e.g., Bowles & Gintis, 1976, chapter 5; Gintis, 1971; Inkeles, 1974; Inkeles & Smith, 1974) suggest that education stimulates non-cognitive changes, including changes in attitudes, values, and behavior. At lower occupational levels, educated individuals are perceived as more desirable employees because they have learned punctuality, obedience, and respect for authority. Those with more education are desired for jobs near the top of the occupational hierarchy because they have developed initiative, self-reliance, and decision-making skills (Bowles & Gintis, 1976).⁵

³ Most of the studies cited here measure human capital in terms of years of formal education. Since few studies include other forms of human capital or control variables such as intelligence or motivation, we cannot attribute outcomes exclusively to the formal education process.

⁴ In fact, personal income returns to education are generally larger in less developed countries (Becker, 1993, p. 17; Psacharopoulos, 1993).

⁵ The assertions of Bowles and Gintis are grounded in the more general claim that schools perpetuate and legitimate the capitalist economic and social hierarchy.

Finally, a number of scholars (e.g., Arrow, 1973; Spence, 1973; 1974; see also Blaug, 1985, pp. 20-23) have proposed that schooling serves as a screening device. According to the strongest version of the screening hypothesis (also referred to as “credentialism”), schooling does not actually contribute to work performance. Employers are interested in educational credentials because they reflect other qualities, such as intelligence, trainability, and motivation, which accurately predict future performance. Weaker versions of the screening hypothesis suggest that employers rely on group characteristics--particularly educational qualifications--to reduce the substantial information costs inherent in hiring procedures (Blaug, 1985).

There is some evidence that educated workers are more productive, particularly at lower levels of education and in the agricultural sector (Colclough, 1982; Jamison & Lau, 1982; Jamison & Moock, 1984; Lockheed, Jamison & Lau, 1980; Rumberger, 1987; United Nations Development Program, 1990; World Bank, 1980; 1990; 1991).⁶ Empirical evidence also suggests that schooling has both cognitive and non-cognitive effects. For example, according to Colclough, evidence from many countries demonstrates that schooling enhances cognitive ability, at least as this variable is conventionally measured via standardized tests. At least two studies, one with a sample of almost 6,000 individuals in six developing countries (Inkeles, 1974; Inkeles & Smith, 1974) and one with a sample of 500 black adults from poor neighborhoods in Boston (Suzman, 1974), found that education was a key predictor of the extent to which individuals held values and attitudes perceived as “modern.”⁷

Although it is difficult to determine the extent to which the relationship between income and earnings is the product of real education-related changes (either cognitive or non-cognitive)

⁶ Maglen (1990) argues, however, that this relationship is unproven, particularly outside of agriculture and at higher educational levels.

or the product of credentialism, this question is in some ways irrelevant.⁸ As Lazear (1977) notes, individuals do not care why employers pay them higher wages (as long as education is the least expensive way to demonstrate their performance potential), and human capital analysis is consistent with both perspectives.⁹ In all likelihood, as Colclough (1982) suggests, all three of the explanations described above are important; while workers need some minimum level of cognitive ability and some minimum set of attitudes and values, employers are also likely to simplify their hiring processes by using educational credentials as a screening device. Whatever the relative importance of these three phenomena, the implication is that better educated workers are likely to have better employment opportunities.

Other positive labor market outcomes seem to be associated with education as well (see Appendix A). Workers with more education receive more on-the-job training, which in turn is positively related to wage growth and negatively related to unemployment. Education is also associated with better benefits and working conditions. For example, Duncan (1976) found that education was a significant predictor of fringe benefits as well as earnings and that the explanatory value of education increased when a composite measure of earnings (including fringe benefits and working conditions) was considered instead of a simple measure of earnings only.

The advantages that educated and skilled workers have over other workers are quite evident in the United States. Workers with more education are less likely to be unemployed and

⁷ Surveys were designed to capture openness to new experiences, sense of efficacy, educational and occupational aspirations, independence, among many other values and attitudes (see Inkeles & Smith, 1974, chapter 2).

⁸ Nonetheless, it has been the subject of much debate (see, e.g., Blaug, 1985; Boissiere, Knight & Sabot, 1985; Colclough, 1982; Layard & Psacharopoulos, 1974; Lazear, 1977; Taubman & Wales, 1975; Whitehead, 1981; Wise, 1975).

⁹ According to Welch (1975), "...the fundamental notion of human capital, of foregoing current income for the prospect of increased future earnings, assumes only that the schooling-income association is not spurious. As such, it

more likely to be employed in “good” jobs (i.e., jobs with higher wages, better benefits, and more opportunities for advancement). For example, in 1992, the unemployment rate among males who had completed only 9-11 years of education was 12.4 percent, compared to 4.8 percent for those with a Bachelor’s degree. The unemployment rate for females with 9-11 years of education was 17.8 percent, compared to 4.8 percent for those with a Bachelor’s degree (U.S. Department of Education, National Center for Education Statistics, 1995). Individuals with more education are also much less likely to experience low earnings. In 1989, for example, almost 45 percent of men with 9-11 years of schooling had annual earnings less than the poverty level for a family of four (among black, non-Hispanic and Hispanic men, the comparable figures were 61.6% and 50.5%, respectively), while less than 11 percent of men with a college degree earned poverty-level wages (Acs & Danziger, 1993, table 4).

These patterns are becoming more definite with recent trends. Labor market outcomes for educated workers have generally improved while those of less educated workers have declined. For example, between 1979 and 1989, the unemployment rate among high school dropouts increased by almost one percentage point, while the unemployment rate for those with some college decreased 0.4 percentage points (Mishel & Burtless, 1995, table 5). Between 1979 and 1995, average real hourly wages decreased 27.0 percent for men with less than a high school education and 16.7 percent for male high school graduates, while the average hourly wage for male college graduates increased 0.6 percent (Mishel, Bernstein & Schmitt, 1997, table 3.19; see also Acs & Danziger, 1993, table 1; Murphy & Welch, 1989).

These labor market outcomes have clear implications for individual and household economic security: Those with stable employment in jobs that provide decent wages and benefits

is fully consistent with the screening view that schools primarily identify preexistent skills and with the view that

will find it much easier to meet their own and their families' material needs. At the same time, these individual-level economic outcomes may also affect neighborhoods. Communities with more educated individuals are likely to be more economically viable. For example, employed and well-paid residents can support local businesses, can maintain their homes (and therefore property values), and can finance better schools.

Other Economic and Personal Outcomes

In addition to the effects of human capital on labor market outcomes, empirical evidence suggests that human capital is associated with other economic and personal outcomes (see Appendix B). More highly educated individuals tend to have higher average savings-income ratios, even when age, family income, and family size are controlled. Since asset-holding is likely to have positive impacts on individual and household well-being--by cushioning income shocks, for example, or by enabling focus and specialization (Sherraden, 1991)--this relationship is important. Some economists have also posited that education results in more efficient non-market production. The emphasis has been on consumption: Educated individuals are expected to be more efficient consumers because they have greater access to knowledge and ideas, can better utilize information, may be more receptive to new ideas, and/or may have greater foresight. Results of Michael's (1975) analyses are consistent with the proposition that education increases household efficiency in non-market production, implying that education has a small positive effect on real income, over and above its effects on earnings.¹⁰

In addition to economic effects, human capital is likely to have positive effects on a number of other personal outcomes (see Appendix B). First, better educated individuals tend to

market skills are produced in school" (p. 65; see also Lazear, 1977; Mincer, 1979, p. 28).

¹⁰ To put it another way, "...households with more educated family members are wealthier in the sense that they can produce more with a given amount of time and money" (Michael, 1975, p. 240).

be healthier. This relationship holds even when a number of other variables (including past health) are controlled (e.g., Grossman, 1975; Strauss, Gertler, Rahman & Fox, 1995). Education not only increases individuals' income and thereby enables them to live healthier lives, it also increases their ability to benefit from nutrition and health information and to utilize health resources (World Bank, 1980; 1993). Some empirical evidence also suggests that education is positively correlated with efficiency in contraceptive use and attainment of desired family size.

There is also a fairly large body of research demonstrating that human capital is positively associated with social resources (i.e., access to information and influence). Individuals with more education and/or higher occupational status tend to be more socially active, to have larger and more diverse social networks, and to have access to higher status others (see Appendix B). To the extent that personal contacts facilitate certain instrumental actions, those with more education--by virtue of better social resources--may find it easier to obtain employment, promotions, scholarships, credit, and so forth.

Other individual-level outcomes have particularly important implications for communities: Individuals with more education are more likely to volunteer, to make charitable contributions, to participate in voluntary associations, and to participate in political activities (see Appendix B). Research by Ehrlich (1975) suggests that education is associated with a decrease in criminal activity. Inkeles and Smith (1974) found that those with more education had a stronger sense of personal and social efficacy; "participated more actively in communal affairs; were more open to new ideas; interacted differently with others, and showed more concern for subordinates and minorities" (p. 143).

Intergenerational Outcomes

In addition to education's intragenerational effects, there is substantial evidence indicating that children of parents with more human capital benefit in numerous ways, even controlling for parental income, occupational status, and so forth (see Appendix C). First, the human capital of parents, particularly of mothers, is strongly associated with children's health. For example, empirical studies in every region of the world suggest that a woman's education is negatively associated with child mortality and positively associated with the health status of her children. Empirical evidence also shows that better educated mothers tend to give more time per child in child care and to provide a wider variety of care to children (Hill & Stafford, 1980; Leibowitz, 1975). Children of more educated parents generally obtain more education than children of less educated parents.¹¹ They may also have higher occupational aspirations, and they may be less likely to be economically inactive as young adults. Finally, teen-age daughters of more highly educated parents appear to be less likely to give birth out-of-wedlock.

Human Capital and Economic Development

Since the notion of human capital was articulated by economists almost 40 years ago, scholars have sought to clarify the relationship between human capital and economic growth. Despite great interest in this relationship, however, empirical evidence remains somewhat ambiguous. Numerous studies suggest that a substantial part of the growth in output experienced by both developed and developing countries in recent decades may be attributed to increased education of the labor force (Psacharopoulos, 1984; Psacharopoulos & Woodhall, 1985, pp. 15-22; see also Anand & Sen, 1994, p. 19; Denison, 1985; UNDP, 1993; World Bank, 1990, p. 80).

¹¹ However, the explanatory power of parents' education seems to decline as children's schooling increases (Mare, 1980; Mare & Winship, 1988).

At the same time, some of the assumptions made in these studies have been challenged,¹² and other empirical studies (e.g., Benhabib & Spiegel, 1994) do not find a direct link between human capital and economic growth.

While more empirical studies may be needed to clarify the direct relationship between human capital and economic growth, it is also important to consider *indirect* links between human capital and economic growth (Maglen, 1990). First, given the relationship between human capital and labor productivity at the micro-level, it is possible that the same positive relationship exists at the macro-level and may contribute to economic growth. Second, human capital, as a stock of knowledge, may stimulate technological change (Mincer, 1989). Third, it may attract other factors necessary for economic growth, particularly physical capital (Benhabib & Spiegel, 1994). Finally, human capital may complement physical capital because investments in the latter will have lower returns without sufficient human capital. For example, machines require skilled individuals to operate and repair them, and modern agriculture requires farmers who can read instructions for fertilizers or repair manuals for equipment. Because the introduction of improved methods of production requires a sufficiently educated and trained labor force, human capital formation may often be necessary for technological advancement and diffusion (Bartel & Lichtenberg, 1987; Benhabib & Spiegel, 1994; Carnoy, 1977; Easterlin, 1981; Griffin, 1989; Nelson & Phelps, 1966; Psacharopoulos, 1984; Romer, 1990).

There is preliminary empirical evidence to support these propositions. Although most studies of the relationship between human capital and labor productivity examine micro-level evidence, at least a few macro-level studies have found a significant relationship between human

¹² These include the assumptions that the earnings of different groups of workers accurately reflect their contribution to output and that educated workers earn more because they are more productive and therefore contribute to economic growth (Psacharopoulos & Woodhall, 1985, p. 19).

capital and productivity. According to the UNDP (1993), labor productivity in Japan and in the East Asian industrializing countries has been increasing at annual rates of at least 10 percent, half of which has been attributed to investments in education and technical skills.

Empirical evidence also suggests that human capital facilitates the adoption and implementation of new technologies and may therefore make an indirect contribution to productivity and economic growth (see, e.g., Bartel & Lichtenberg, 1987; Jamison & Lau, 1982; Wozniak, 1984; 1987). According to Benhabib and Spiegel (1994), human capital appears to attract physical capital, stimulate domestic technological innovation, and help countries adopt new technology from abroad. Maglen (1990) also notes that education is associated with a willingness to adopt new technology but claims that the links between this relationship and higher average productivity or faster economic growth have not yet been established. Although more empirical research is needed for confirmation and clarification, it appears that human capital contributes directly and/or indirectly to economic growth, at least under certain social, economic, and political conditions.

Unequal Opportunities for Human Capital Development

The relationship between economic origin and human capital is clearly and strongly negative: Those who grow up in low-income households generally have fewer opportunities for human capital development. These inequities are particularly apparent with regard to the quality and quantity of education received.

Quality of Education

Jonathan Kozol (1991; see also Taylor & Piché, 1990) has vividly described an American public school system characterized by “savage inequalities.” Since public schools receive much of their funding from local taxes, schools in property-poor districts may be severely underfunded-

-even when property tax rates are higher than average. Although state and federal financial assistance may help reduce disparities, these programs rarely equalize funding. For example, for the 1989-90 school year, public school districts with a median household income of less than \$20,000 received \$4,297 in total revenue per student. The comparable figure for districts with a median household income of \$35,000 or more was \$5,862 per student, a difference of 36 percent (U.S. Department of Education, National Center for Education Statistics, 1995).¹³

These fiscal inequalities have tragic implications for public school students in property-poor school districts. Kozol (1991) describes schools that cannot provide children with textbooks, supply science laboratories with proper equipment, or even regulate the temperature in classrooms. Underfunded schools often have limited curriculums, extremely high student-teacher ratios, crumbling facilities, and inexperienced or poorly-paid teachers. Somewhat ironically, wealthier school districts generally offer a greater range of services and programs for at-risk students and provide these services to a greater proportion of eligible students than do poorer districts (Taylor & Piché, 1990, chapter 5). While wealthier parents may be able to send their children to private schools or to choose better public schools via choices in residence, children in low-income families have few, if any, options. Legal challenges in recent years have led to reform in many states, but substantial inequalities remain. Consequently, students from lower-income families (who are much more likely to reside in property-poor school districts) often have dramatically different educational experiences than students from higher-income families.

¹³ This difference is reduced to 16 percent when adjustments are made for cost-of-living. However, these figures do not consider the fact that districts with more poor children may need more revenue to provide education comparable to that provided in districts with fewer poor children (U.S. Department of Education, National Center for Education Statistics, 1995).

Quantity of Education

In addition to differences in educational quality, empirical evidence clearly reveals income-related differences in the quantity of education obtained (see Appendix D). In 1994, for example, 93.9 percent of unmarried 18-24 year-olds from families in the highest family income quartile had graduated from high school. The comparable figure for young adults in the lowest income quartile was 66.6 percent (Mortenson, 1995). Income-related differences in college enrollment and graduation are even more dramatic. Mortenson estimates that, in 1994, a student from the highest family income quartile was ten times more likely to earn a college degree by age 24 than a student from the lowest income quartile.¹⁴ Mortenson also demonstrates that differences in post-secondary education by household income have increased: While the percentage of higher-income students graduating from college has been increasing over the last 25 years, the proportion of lower-income graduates has remained about the same.

These differences in educational attainment may be attributed to many factors (see Appendix D). Clearly, one of the most direct relationships between economic resources and educational attainment involves the extent to which students can afford post-secondary education. As several economists (e.g., Becker & Murphy, 1988; Becker & Tomes, 1986; Behrman, Pollak & Taubman, 1995, chapter 5) predict, investments in the human capital of children from poorer families are likely to be limited by reduced opportunities for financing these investments. Without the immediate resources to finance tuition, fees, and foregone earnings,¹⁵ and if opportunities to borrow funds for education are limited, students from lower-income families will find it much more difficult to attend college.

¹⁴ Families in the lowest family income quartile made less than \$22,033. Those in the highest quartile made more than \$67,881.

¹⁵ Foregone earnings are generally the most important cost of attending college (Becker, 1993, p. 169; Mincer, 1979).

Economic resources are likely to affect educational attainment in many other ways as well. Since many of the variables that predict educational attainment are in some way correlated with income, observed bivariate relationships may disguise important income effects. For example, although cognitive ability clearly impacts educational attainment (Fägerlind, 1975; Jencks et al., 1972; Sewell & Hauser, 1975), empirical evidence suggests that ability is partly the product of nutritional adequacy (Brown & Pollitt, 1996; Griffin & McKinley, 1994; World Bank, 1990; 1993), and home investments in children (Fägerlind, 1975; Leibowitz, 1974; Murnane, 1981), both of which are related to income. Similarly, empirical evidence demonstrates that the expectations and aspirations of significant others affect children's educational attainment (see Appendix D), but it is quite likely that the parents, teachers, and peers of many low-income children will have relatively low expectations and aspirations. Although a number of empirical studies have found that growing up in a single parent family has independent effects on educational attainment (see Appendix D), some have noted, at least for whites, that much of the relationship between educational attainment and growing up in a female-headed household may be attributed to limited economic resources (McLanahan, 1985; Shaw, 1982). Finally, as discussed above, the educational attainment of many low-income children is certainly affected by the quality of elementary and secondary education received, another variable which is strongly related to income.

These differences in opportunities for human capital development have important implications. Differences in college graduation are particularly important today because the demand for educated labor is high, relative to the demand for less-educated labor.¹⁶ As Becker

¹⁶ This pattern is likely to persist, at least for the foreseeable future: According to projections from the Bureau of Labor Statistics (Silvestri, 1995), employment in occupations requiring an associate degree or more education will grow more rapidly between 1994 and 2005 than employment in other occupational groups.

(1993) suggests, “The systematic application of scientific knowledge to production of goods has greatly increased the value of education, technical schooling, and on-the-job training as the growth of knowledge has become embodied in people...” (p. 24; see also Bartel & Lichtenberg, 1987; Mincer, 1989; Murphy & Welch, 1989). As the demand for educated workers has increased, so have the personal monetary returns to college education (relative to high school education) (Murphy & Welch, 1989). Empirical evidence cited above indicates that workers with a college degree have experienced real wage gains, while less-educated workers have seen their real earnings decline. These trends suggest that persistent inequalities in educational opportunities result in increasing income inequality.

FACILITATING HUMAN CAPITAL

How should social work respond to this information? Overall, the profession should consider the formation of human capital as a central commitment and organizing theme. To be sure, teachers and other educators are the primary profession of human capital development in any society, but as the data well indicate schools and schooling are not by themselves sufficient to the task. Nor is school social work the only pathway for social workers to become involved. Social work practice, in many if not most of its applications, should be viewed not merely as an endeavor to solve problems, but also as an opportunity to build human capital--in knowledge, skills, experience, credentials, position, health, physical ability, mental capacity, and motivation--that can contribute to future well-being.

Viewed through this lens, our understandings of issues and approaches to social work practice and policy would change in subtle and not so subtle ways. What are some specific applications? Below, we describe several specific strategies for promoting human capital

development. Although these strategies are designed with particular concern for low-income groups, other groups are likely to benefit as well.¹⁷

Invest in Early Childhood Development

The standard empirical proxies for human capital--years of formal education and, to a lesser extent, measures of on-the-job training and experience--imply that human capital is almost exclusively determined by investments in institutionalized training. A broader conceptualization would acknowledge that human capital is the product of various types of investments, including family investments in the development of children (Mincer, 1979), public investments in nutrition, health, and educational institutions, private investments in job training, and individual investments of time, effort, and financial resources.

With this conceptualization of human capital in mind, it is clear that poor children may *begin* the process of human capital development at a disadvantage. Low-income parents are likely to have fewer resources (time, energy, money, information) to invest in early childhood development (Comer, 1993). These early differences are likely to interact with differences in educational opportunities, multiplying differences in human capital. As Fägerlind (1975) suggests,

The resources the individual has access to in early childhood, mainly family resources and personality assets, are converted into “marketable assets” mainly through the formal educational system....The school system alone is not an adequate instrument for equalizing opportunities. This is because educational benefits are best used by those who come from advantaged backgrounds. Without

¹⁷ For some outcomes (e.g., reductions in criminal activity), members of middle- and upper-income groups may benefit directly. For other outcomes, the benefits will be indirect (e.g., improvements in health and increases in employment and wages are likely to reduce transfer payments, which may lower tax rates).

some kind of equalization of home and child-care resources the educational system will function as a stratifier, wherein successful performances in one socializing setting are used to justify different and more advantageous treatments in the next. (p. 78)

There are many ways to support the early development of disadvantaged children. At a minimum, we should meet the basic nutrition and health care needs of all preschool children. As Birch and Gussow (1970) demonstrate, there are profound income-related differences in the health status of children, and educational interventions alone are unlikely to remedy the school failure of disadvantaged children. Recent research on poverty and malnutrition suggests that poor nutrition may negate the benefits of education, a nontrivial relationship to say the least since approximately 12 million American children in 1992 received significantly less than the recommended levels of nutrients established by the National Academy of Sciences (Brown & Pollitt, 1996). At the same time, preliminary evidence suggests that adequate nutrition during infancy and early childhood can lessen the cognitive deficits which typically accompany poverty. In one longitudinal experiment in Guatemala, a high-protein food supplement “served as a kind of social equalizer, helping children from low-income families achieve at the same level as their slightly more economically advantaged peers within the village” (Brown & Pollitt, 1996, p. 41).

Second, we should increase funding for preschool programs such as Head Start which are designed to increase the school-readiness of disadvantaged children. Empirical evidence demonstrates that these programs can have both short-term and long-term positive outcomes (Berrueta-Clement, Schweinhart, Barnett, Epstein & Weikart, 1984; Taylor & Piché, 1990; Zigler & Styfco, 1993). For example, Berrueta-Clement et al. found that those who participated in the Perry Preschool Project were significantly more likely at age 19 to have graduated from high

school, to be employed, and to be enrolled in college or vocational training. An estimate from the House Select Committee on Children, Youth, and Families suggests that, by reducing special education and welfare costs and by increasing worker productivity, every dollar invested in quality preschool education returns six dollars (U.S. Congress, 1988).

Third, we should begin to view support for parents as an investment in children (see, e.g., Bergmann, 1993). In other words, we should acknowledge that income support policies such as the Earned Income Tax Credit and children's allowances could help low-income parents meet the material needs of their children, and that policies which provide support for child care expenses could enable working parents to secure adequate child care arrangements. We should also continue to invest in programs that provide education to new parents, such as Parents-As-Teachers and Women, Infants, and Children.

Any one of these strategies would be an important investment in early childhood development, but it is also important to consider the multiplicative effects of a combination of programs. Research from developed and developing countries demonstrates that integrated programs of health, nutrition, and cognitive stimulation for young children contribute to increased school readiness, decreased drop-out rates, and increased efficiency of educational investments (World Bank, 1995). The French system of child welfare--which combines child care, income support, and medical care programs--could serve as one possible model for the United States (Bergmann, 1993).

Invest in Basic Health and Nutrition

While the preceding section emphasizes investment in the health of preschool children, improvements in the health of school-age children, adolescents, and adults also represent investments in human capital. Good health is strongly associated with the ability to take

advantage of opportunities for human capital development.¹⁸ Improved nutrition and health can increase school attendance rates, school performance, and cognitive test scores (Griffin & McKinley, 1994; World Bank, 1990; 1993). We can expect the same positive effects of health on the development of knowledge and skills in non-school settings. These relationships provide a clear rationale for meeting basic nutrition and health needs. Improvements in health and nutrition are particularly important for poor individuals because they experience illness more often, rely almost exclusively on labor for their income, and have little or no savings to carry them through periods of illness (Serageldin, 1995; World Bank, 1993).

Increase Targeted Financial Support for College Education

Evidence cited earlier suggests that the importance of a college education has increased because income-related disparities in college graduation have risen. Although many factors undoubtedly contribute to lower rates of college graduation among low-income students, the inability of families to finance college education plays an important role (see, e.g., Becker & Tomes, 1986). It is essential to increase financial support for college-related expenses.

President Clinton has proposed two tax policies designed to make college more affordable: (1) \$1500 tax credits designed to cover tuition at community college, and (2) \$10,000 tax deductions for education and training. Although these policies are likely to make college more *affordable*, a recent report by the Institute for Higher Education Policy and the Education Resources Institute suggests that tax policies will do very little to promote *access* to higher

¹⁸ In fact, investing in basic health and nutrition should be considered a basic social development strategy (Beverly & Sherraden, 1997). These investments not only improve the well-being of individuals but also contribute to economic development by enabling workers to be more productive and innovative (see, e.g., Behrman, 1993; Schultz, 1961; Streeten et al., 1981; World Bank, 1980; 1990; 1993).

education for students from low-income families.¹⁹ To address the income-based disparity in college attendance, experts from these research groups advocate an expansion of the need-based Pell Grant program. They estimate that the Pell Grant maximum would need to be raised to \$5,000 (from its current level of \$2,700) to match the real value of a 1980 Pell Grant (Applebome, 1997; see also Breneman & Galloway, 1996).²⁰

Increase Opportunities for Non-College-Bound Youth

While it is important to promote more equal access to college, we must also consider the long-term employment opportunities of those who do not attend college. Just over half of all high school graduates attend some sort of postsecondary institution (U.S. General Accounting Office, 1990), yet the U.S. does little to help non-college-bound youth transition to work. For example, these young adults receive little career counseling or placement assistance. Although Congress passed the School-to-Work Opportunities Act in 1994,²¹ it is by no means clear that the ensuing demonstrations will result in a more comprehensive national program facilitating the employment of non-college-bound youth.

The low wages and limited employment opportunities of individuals without a college education may reflect more than transitional difficulties, however. Murnane and Levy (1996) suggest that today's high school graduates are not equipped with the basic skills that employers demand (i.e., reading, math, communication, and problem-solving skills; the ability to work in a group; and basic personal computer skills). In fact, according to Murnane and Levy, employers often prefer to hire workers with college degrees not so much for the knowledge and skills they

¹⁹ Since lower-income families are much less likely to have tax liabilities, these tax policies, unless refundable, will primarily benefit middle- and upper-class families.

²⁰ President Clinton has recently proposed raising the maximum to \$3000.

²¹ This legislation encourages voluntary demonstrations by states and localities and emphasizes business-education partnerships. Total funding for fiscal years 1994 and 1995 was less than \$500 million (Wilson, 1996, pp. 217-8).

learned in college, but simply because college graduates are more likely to have the desired *basic* skills. To the extent that employers hire college graduates for the basic skills they should have acquired in elementary and secondary schools, we could do much to improve the labor market outcomes of non-college-bound youth by improving the quality of K-12 education.

In recent months, President Clinton's proposals for national curriculum standards and national examinations have stimulated debate. Although these and other strategies may be desirable, the most important first step involves addressing fiscal inequities in public education. Given the vast disparities described earlier, it is clear that many children in low-income neighborhoods do not receive an adequate education. Increasing funding for public schools in property-poor districts will not, by itself, equalize public educational opportunities, but it is fundamental to the success of other initiatives.

Facilitate Lifelong Learning

The nature of the labor market is changing. In the industrial era, we thought of a "job" as a stable and long-term arrangement. This was suited to the requirements of mass production, relying on a relatively low-skilled labor force. With the advent of the information age, the nature of production is changing and along with it the nature of work and the definition of a "job." Production is becoming more specialized, made-to-order, and fluid. Labor in this environment is becoming more temporary, shifting from task to task and job to job as demands change. More and more workers are "contingent workers," earning their livings by some combination of temporary employment and entrepreneurial activity. Manpower, Inc., a temporary employment agency, is now the largest private sector employer in the United States.

These changes will have huge implications for education. Education today is structured to fit the industrial era; it is mass education and assumes that the knowledge and skill demands of

the labor market are relatively stable. The pattern of education that we have established--twelve to twenty years of schooling early in life, followed by several decades of work without schooling--will give way to a pattern of education and work interspersed throughout life. In the emerging work environment, lifelong learning is commonly accepted, and indeed will become necessary for most workers. Social work can facilitate lifelong learning by designing and advocating for basic social supports whether one is working or learning. These supports would include basic health care that is available to all and not tied to a specific employer and subsidies for adult education and retraining as a major priority of public expenditure.

Along these lines, education will begin to occur less often in school buildings and more often in homes and offices via the internet. This revolution could create growing inequality as a result of differential access to information and education. For these reasons, it will be essential to connect everyone to the worldwide information and education system. This is a more realistic possibility than might seem likely at first glance. Since information technology and access are relatively cheap compared to industrial-era education, it is not unrealistic to imagine that almost everyone in the entire world will have access to this system within several decades. The economic pay-offs for everyone, rich and poor alike, would be enormous. But it will not happen automatically. Strong advocacy will be required to connect poor and marginalized people.

Invest in People Instead of Programs

In all of these recommendations is the implication that social policies should invest in people instead of programs. The industrial era has been marked by categorical programs to serve mass "needs," but this cookie-cutter approach to human welfare and development is inconsistent with the empowerment of people to make their own choices about the types of investments that they wish to make in themselves and their families. More decisions should be put into the hands

of ordinary people so that they can respond efficiently to their particular situations and opportunities.

One way to do this is to create asset accounts for education and training; these might be called Individual Training Accounts as recently proposed by President Clinton. In the private sector, this concept has been pioneered by the Council on Adult and Experiential Education (CAEL), which works with companies to set up Individual Tuition Accounts for their employees. By August 1996, over 10,000 individuals were participating in these programs, with an average balance of about \$1,000 (Edwards, 1997). CAEL and participating employers have found that workers make much better use of these training funds than of training that is offered *en masse* to all employees. Because the money is “theirs” workers make careful choices about how to invest in themselves, and they are more committed to the training. Following proposals by Sherraden (1991), at least three states--Oregon, Massachusetts, and Mississippi--have set up special asset accounts in welfare reform to be used for education and training. Under these plans, one dollar for every hour worked goes into a special training account for the worker (Edwards, 1997).

Eventually, it is likely that asset accounts will be used for multiple purposes, such as home ownership, entrepreneurial activity, education, training, and other development purposes. Sherraden (1991) has proposed individual development accounts (IDAs) for this purpose. A key theme in IDA proposals is that asset accumulation should be progressively subsidized at the bottom. IDAs have been included as a state option in the federal welfare reform legislation, and provision for some type of special savings account has been set up in at least 16 states at this writing. During the coming century, it is likely that asset accounts will become a central domestic policy instrument, and this will facilitate human capital investments. However, there is

a great danger that poor people will be excluded. The agenda of IDAs is to demonstrate that asset accounts are desirable for everyone, including the poor (Sherraden, 1996).

SUMMARY AND CONCLUSION

As the preceding discussion demonstrates, there are many reasons to view improvements in human capital as *investments* in social and economic well-being. Human capital characteristics have important effects on labor market outcomes, particularly when the demand for skilled workers is high relative to the demand for unskilled workers. In turn, labor market outcomes have important implications for individual and household economic security. Human capital is also likely to have important non-economic outcomes, including improvements in the health of children and adults, increased ability to attain desired family size, increased investment in the early development of children, reduced criminal participation, and increased community participation. At an aggregate level, human capital is a key factor in economic development.

These relationships suggest that human capital investments will benefit individuals, households, neighborhoods, and society as a whole. However, since members of disadvantaged groups generally have reduced opportunities for human capital development, low-income individuals and communities do not share these benefits equally. Because social workers have traditionally advocated for improvements in social welfare and have a particular concern for those who are marginalized, it is particularly appropriate to promote investments in human capital. Given the recent trend toward increasing returns to education--reflected in rising wage inequality--a heightened emphasis on human capital issues would be particularly timely.

A focus on human capital would be appropriate and timely for political reasons as well. Investments in human capital have the potential to integrate economic development with

improvements in social welfare, a characteristic that is very important in the current political climate. Since conservative political forces in the U.S. and in many other developed countries have begun to undermine the normative basis for the welfare state, those who are concerned about social welfare must adopt new political strategies. Developmental approaches, which emphasize social policies that contribute to economic growth, are likely to have greater political appeal than residual and consumption-oriented interventions. In short, there is a strong rationale for social work to adopt human capital as its professional “bailiwick.” If anything, this rationale is even stronger today than when Theodore Schultz offered it in 1959. Hopefully another four decades will not pass before social work takes seriously this message.

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Appendix A

Effects of Education on Labor Market Outcomes

Outcome	Empirical Studies or Reviews
Occupational status/prestige	Blau & Duncan, 1967; De Graaf & Flap, 1988; Flap and De Graaf, 1986; Haveman & Wolfe, 1994; Lin, Ensel & Vaughn, 1981; Lin, Vaughn & Ensel, 1981; Marsden & Hurlbert, 1988; Sewell & Hauser, 1975
Income	Acs & Danziger, 1993; Becker, 1992; Grubb, 1993; Haveman & Wolfe, 1984; Murphy & Welch, 1989; U.S. Dept. of Education, National Center for Education Statistics, 1995
Unemployment*	Mincer, 1989; U.S. Dept. of Education, National Center for Education Statistics, 1995
On-the-job training	Mincer, 1989
Fringe benefits	Duncan, 1976
Working conditions	Duncan, 1976; Lucas, 1977

*Inverse relationship

Appendix B

Effects of Education on Other Economic and Personal Outcomes

Outcome	Empirical Studies or Reviews
Agricultural productivity	Jamison & Lau, 1982; Jamison & Moock, 1984; Lockheed, Jamison & Lau, 1980; Welch, 1970
Other non-market productivity	Hettich, 1972; Michael, 1972; 1975
Saving-income ratio	Solmon, 1975
Own health status	Grossman, 1975; Strauss et al., 1995; World Bank, 1980; 1993
Efficiency in contraceptive use/Attainment of desired family size	Cochrane, 1979; Haveman & Wolfe, 1984; Schultz, 1993
“Modern” attitudes and values	Inkeles, 1974; Inkeles & Smith, 1974; Suzman, 1974
Social resources	Campbell, Marsden & Hurlbert, 1986; Fischer, 1982; Flap & De Graaf, 1986; Lin & Dumin, 1986; Lin, Ensel & Vaughn, 1981; Lin, Vaughn & Ensel, 1981, Marsden & Hurlbert, 1988
Personal and social efficacy	Inkeles & Smith, 1974
Volunteer behavior	U.S. Dept. of Education, National Center for Education Statistics, 1995
Charitable contributions	U.S. Dept. of Education, National Center for Education Statistics, 1995
Organizational participation	Fischer, 1982; Rohe & Stegman, 1994; Verba & Nie, 1972
Political participation	Rothman, 1993; Verba & Nie, 1972; Verba et al., 1993
Criminal activity*	Ehrlich, 1975

*Inverse relationship

Appendix C

Intergenerational Effects of Parental Education

Outcome (for child)	Empirical Studies or Reviews
Health status	Colclough, 1982; Cochrane, O'Hara & Leslie, 1980; Schultz, 1993; UNDP, 1990; Wolfe & Behrman, 1982; World Bank, 1990
Educational attainment	Alwin & Thornton, 1984; Blau & Duncan, 1967; Brooks-Gunn et al., 1993; Duncan, 1994; Fägerlind, 1975; Haveman & Wolfe, 1994; 1995; Haveman et al., 1991; Hill & Duncan, 1987; Leibowitz, 1974; Lin, Ensel & Vaughn, 1981; Lin, Vaughn & Ensel, 1981; Mare, 1980; Marjoribanks, 1991; McLanahan & Bumpass, 1988; Smith et al., 1995
Occupational aspirations	Marjoribanks, 1991
Economic inactivity*	Haveman & Wolfe, 1994
Teen-age out-of-wedlock birth*	Haveman & Wolfe, 1994

*Inverse relationship

Appendix D
Antecedents of Educational Attainment^a

Antecedent	Empirical Studies or Reviews
Parental education	Alwin & Thornton, 1984; Blau & Duncan, 1967; Brooks-Gunn et al., 1993; Duncan, 1994; Fägerlind, 1975; Haveman & Wolfe, 1994; 1995; Haveman et al., 1991; Hill & Duncan, 1987; Leibowitz, 1974; Lin, Ensel & Vaughn, 1981; Lin, Vaughn & Ensel, 1981; Mare, 1980; Marjoribanks, 1991; McLanahan & Bumpass, 1988; Ribar, 1993; Smith et al., 1995
Household income	Becker, 1991; Becker & Tomes, 1986; Brooks-Gunn et al., 1993; Corcoran & Datcher, 1981; Duncan, 1994; Haveman & Wolfe, 1994; 1995; Hill & Duncan, 1987; McLanahan, 1985; McLanahan & Bumpass, 1988; Mortenson, 1995; Sandefur et al., 1992; Sewell & Hauser, 1975; Sewell et al., 1980; Shaw, 1982; Smith et al., 1995
Cognitive ability	Fägerlind, 1975; Jencks et al., 1972; Sewell & Hauser, 1975
Growing up in a single-parent family/Experiencing a change in family structure*	Astone & McLanahan, 1991; Brooks-Gunn et al., 1993; Coleman, 1988; Furstenberg & Hughes, 1995; Haveman & Wolfe, 1994; 1995; McLanahan, 1985; McLanahan & Bumpass, 1988; McLanahan & Sandefur, 1994; Sandefur et al., 1992; Shaw, 1982; Smith et al., 1992
Number of siblings*	Alwin & Thornton, 1987; Coleman, 1988; Haveman & Wolfe, 1994; Hill & Duncan, 1987; Smith et al., 1992
Residential mobility*	Coleman, 1988; Haveman & Wolfe, 1994; Haveman et al., 1991; Smith et al., 1992; Smith et al., 1995
Parental expectations/aspirations for child's education	Astone & McLanahan, 1991; Coleman, 1988; Datcher, 1982; Furstenberg & Hughes, 1995; Sewell et al., 1970; Smith et al., 1992; Smith et al., 1995
Participation in a preschool program for disadvantaged children	Berrueta-Clement et al., 1984
Participation in church activities	Coleman & Hoffer, 1987; Ribar, 1993; Smith et al., 1992; Smith et al., 1995
Early childbearing*	Mott & Marsiglio, 1985; Ribar, 1993
Neighborhood income and economic status	Brooks-Gunn et al., 1993; Crane, 1991; Datcher, 1982

^aEducational attainment is measured in different ways. For example, some studies examine whether individuals graduate from high school, while others consider years of education completed.

*Inverse relationship