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Reproductivity, capital theory, and objectivist ethics

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Abstract

Purpose – The purpose of this paper is to discuss how reproductivity (child-rearing) fits into ethics. It aims to use objectivist ethics (OE) specifically as the framework for considering this.

Design/methodology/approach – The approach is conceptual in nature. Economic concepts are used to analyze and extend an ethical issue and the cardinal values within OE, which includes productive purpose, are reviewed.

Findings – The paper argues that reproductivity is sufficiently different from productivity to be a separate category. Then using the trader principle, the objectivist case for inheritance, and capital theory, the case is made that reproductivity is required of each person in the same sense that productivity is.

Originality/value – This is an original argument made by the author in *Then Athena Said: Unilateral Transfers and the Transformation of Objectivist Ethics*. In that work, reproductivity is linked to human capital replacement, depreciation, the sinking fund, and Irving Fisher's conception of standard income. This paper also relates it to permanent income. Also, the conclusions are more inclusive than those in the previous work in that other forms that the replacement of human capital can take in addition to reproduction are considered.

Keywords Ethics, Human capital, Depreciation replacement costs, Sinking funds

Paper type Conceptual paper

Introduction

Ayn Rand, and the philosophy she founded – objectivism, have long been relegated to the fringes of philosophy. Rand, best known as a novelist, published a number of essays on philosophical issues. Rand was not an academician nor did she write for scholarly journals (Sciabarra, 1995, p. 1). Her non-fiction was free of footnotes and references. Her writing style, with some exceptions, was passionate. Some have even labeled it bombastic (Wheeler, 1986, p. 96). For subject matter that is dense and nuanced and must be read and re-read to be fully grasped, there are those for whom a drier style is preferred. These have been given as some of the reasons why Rand was ignored by the academe. (Some even attributed it to her so-called "prickly" personality; Sciabarra, 1995, p. 4.) Whether any of these has merit is moot. Suffice it to say, that in recent years Rand has been "mainstreamed." If not part of the "canon," her work is at least being given serious consideration by academicians – whether in literature, philosophy, or women studies (Stoloff, 2000, 2001).

Elements of Rand's writings can be attractive to economists as well. Her ethics are grounded in economic terminology. Ethical content is given to economic constructs such as productivity (Rand, 1967b, p. 17), consumption (Rand, 1982, p. 132), saving (Rand, 1982, p. 126), investment (Rand, 1982, p. 131), money (Rand, 1982, p. 127), and value (Rand, 1964a, p. 15). Objectivism permits the application of tools of economic analysis to philosophical abstractions.

Productive work is the central cardinal virtue in objectivist ethics (OE; Rand, 1964a, p. 25). Rand's cardinal virtues can all be achieved by a man alone "on a desert island" (Rand, 1961a, p. 127). Virtues that deal with other people are not fundamental; that is, other people are not a fundamental part of reality, from an ethical perspective (Peikoff, 1991, pp. 252-3). The primary virtue involving other people within OE is the trader principle – the bilateral exchange of values (Rand, 1964a, p. 31). Rand did not address

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one-way transfers *per se* within OE; however, two types of unilateral transfers were singled out for discussion. These were charity and inheritance. Child-rearing is viewed as being potentially productive within OE.

In my book *Then Athena Said: Unilateral Transfers and the Transformation of Objectivist Ethics*, I examined unilateral transfers within the objectivist framework – as indicated by its subtitle. These included (but were not limited to) theft, charity, gift-giving, and child-rearing. I referred to the latter as "reproductivity," and concluded that, like productive purpose, it is a cardinal value. Unlike objectivism's other cardinal values, reproductivity cannot be achieved alone. The implication of this is that other people are (at least one other person is) a fundamental part of reality, ethically speaking. Also, since productivity is required of every individual, I argued that reproductivity is as well. In my discussion of "reproductivity," I relied on human capital theory; specifically the replacement of human capital.

In this paper, I include other alternatives in addition to reproduction that human capital replacement may take. I also examine the relevance of the concept of permanent income to this decision and why this income concept is consistent with decision making within OE.

Production: the central value in OE

OE is grounded in human nature. Rand (1964a, p. 17) bridged the is-ought gap by stating that what a person is determines what he ought to do. The fundamental alternative in OE is between existence and non-existence. Values are those ends that sustain a person's life, and virtues are the actions that achieve or maintain those values. A person's life is the ultimate value (Rand, 1964a, p. 25). To sustain one's life, a person must consume. However, Rand pointed out that production must precede consumption (Rand, 1961b, p. 80). This is an economic reality recognized early on by Adam Smith ([1776] 1937). Since man must consume to survive, he must produce.

Productive purpose is the central cardinal value in OE, and productive work the corresponding cardinal virtue. The other cardinal values in OE are reason and self-esteem; rationality and pride being the correlative cardinal virtues. All of these can be practiced by a man alone on a desert island. In that circumstance, a man would have no alternative but to produce for himself. He would otherwise perish. A parasitic lifestyle would be impossible for him (Rand, 1961a, p. 127). Productivity is a moral imperative in OE.

Reproduction: morally optional in OE

It might be thought that an ethics that is grounded in human nature, one for which life is the ultimate value, would have reproduction as a primary value, perhaps the central value, since reproduction is necessary to sustain life. Unlike production, reproduction is morally optional within OE (Rand, 1968, p. 3; Merrill, 1991, pp. 103, 121; 1997, pp. 86-9; Walker, 1999, pp. 112-15). Although reproduction is necessary to sustain life, it is not required in order to sustain one's own life, and it is one's own life that is the ultimate value in OE.

Rand believed that child-rearing could be productive if approached as a career (Rand, 1964b, p. 7); that is, reproduction is merely one form among the many that production may take. I agree that "reproductivity" is a productive activity. From an economic perspective, child-rearing can be regarded as an investment in human capital, but it is an investment in which the return is not to the investor. It is not remunerative (Touchstone, 2006, p. 9). According to OE, the primary purpose of production is to sustain one's own life. There are many kinds of productivity that need not be remunerative. Do-it-yourself work is not remunerative, for instance. The difference between child-rearing and, say, producing one's own vegetable garden is that in the latter case, one could potentially sell the product of his efforts (tomatoes, for instance). This is not the case for reproductivity – one cannot (morally) sell the product of one's efforts. A parent is the guardian of a child, but he is not the child's owner. To the extent that it may be argued that a parent has ownership rights, those rights are not complete. Full ownership is the right to acquire, use, and dispose of that which one owns. A parent does not have the right to use or dispose of a child in any way he might choose. Although reproductivity may be rewarding in a number of respects, it is primarily unilateral in nature[1]. For these reasons, I believe that within the context of OE, "reproductivity" is sufficiently different from productivity to warrant assigning it to a separate category.

If as is OE contends, reproductivity is simply one form that productivity can take then, like other types of productive activity that require other people (playing a musical instrument in a symphony, for instance), it is not essential to man's existence, *per se*. If, however, reproduction is a separate category and is considered vital to man's existence, then it is a primary value – one that cannot be achieved by a man alone on a desert island. This is because reproductivity, by its nature, requires the existence of and the interaction with another person. Others (at least one other person) would be fundamental to reality – at least, for the time necessary to conceive (Touchstone, 2006, p. 34).

The trader principle

Rand maintained that a person must produce; that is, every person must. As noted, on a desert island, a person would have to produce or perish. When living among others, self-sufficiency is no longer necessary. As Adam Smith ([1776] 1937) recognized, it is not even desirable. Exchange tends to yield mutual benefits to the trading partners. It can result in more being produced than if each person had to rely on producing everything he consumed.

Rand elevated trade – the bilateral exchange between independent equals – to a social norm. It is OE's primary social principle – the principle of justice (Rand, 1964a, p. 31). The trader principle is not limited to economic exchange, but also includes the exchanges of ideas (resulting in the expansion of knowledge) and of love (resulting in friendship) (Kelley, 1996, pp. 24-5; Peikoff, 1991, pp. 236-7). When a person lives among others, it is also the case that a person may not be productive, yet still may survive (Mack, 1986, p. 136). There are those who default on others; those who steal, kill, and/or defraud others in order to sustain themselves. I refer to these actions as forced unilateral transfers (Touchstone, 2006, p. 39).

According to Rand, parasitic behavior does not yield success in the long run. Ethics are those actions that are life sustaining when practiced long range (Peikoff, 1991, p. 219). According to objectivism's benevolent universe premise (BUP) if a person acts rationally (ethically), he can expect success long range (Peikoff, 1976; quoted in Binswanger, 1986, pp. 50-1; see also, Paterson, 1968, pp. 250-1), life being the standard of success. Why not commit force or fraud against another to sustain one's life? This is an age-old ethical question. Rand's answer deals with rights, but her case is not primarily other-oriented. A person does not violate another's rights, not because of the effect it would have on the other person (primarily), but because of the effect it would have on oneself (Mack, 1986, 1998).

Although Rand did not use the prisoners' dilemma (PD) framework for drawing this conclusion, the PD can be used for analyzing it. In a PD, each player faces the temptation of defection. Each person who potentially engages in an exchange with another sees the possibility of short-run gain by defaulting; that is, of choosing the unilateral (theft or fraud) alternative. However, it has been shown that in repeated "games," a tit-for-tat strategy works best. A tit-for-tat strategy is one in which a player cooperates with others who cooperate and retaliates against those who do not. This strategy yields success if there is the opportunity for future interaction (particularly if the there is an indefinite time horizon). Even if there were no chance for interaction with this particular person, this would be the case so long as there is the potential of one's behavior being observed by others, or if there is the likelihood of one being "caught" so that one's reputation would be damaged (thereby negatively affecting one's likelihood of interacting with others in the future). In either circumstance, the best course would be to cooperate. The strategy's counterpoint recommends that if one's trading partner defaults, then one should respond by retaliating (Axelrod, 1984, pp. 50-5).

What is the incentive to cooperate with a person in a single-shot game; that is, a one-time encounter in which there is no future interaction, particularly if there is no chance (or a low probability) of being detected if one cheats? One reason goes to human nature. Robert Frank has argued that in order to sustain the emotions necessary to cooperate when detection is likely, a person must also cooperate in those "golden opportunities" when detection of default is low or zero (Frank, 1988, pp. 75-95). Unlike Rand's, Frank's case is a pragmatic one. However, since, according to Rand, OE is formulated on the basis of human nature, in that sense, Frank's rationale lends support to her argument. The PD analysis provides support for the trader principle in that "reciprocity" is a "successful strategy" in the long run.

Voluntary unilateral transfers

A person must be productive in order to sustain his life. According to Rand, a man does not *need* others to provide him with his means of existence. He is obligated to provide those for himself (or perish), and he is capable of doing so (he is, by nature, efficacious). However, during a lifetime, a person may consume more than he produces at some times, and produce more than he consumes at others. Rand's ethics are long range in nature. A more complete statement of the "productivity principle" would be that a person should not consume more than he produces during the course of his lifetime (Rand, 1961a, p. 89).

The trader principle implies that a person should neither give nor receive the unearned or undeserved (Rand, 1961a, p. 133; 1964a, p. 27). A person may take out loans, but he must pay them back. Default is equivalent to theft (Rand, 1964d, p. 111). Loans are bilateral in nature. Not only should a person not engage in forced unilateral transfers, he should also avoid voluntary unilateral transfers. There are exceptions to the latter[2]. According to the BUP, mishaps are the metaphysical exception (Rand, 1964c, p. 48). However, they do occur. In such circumstances, it is acceptable to receive assistance from others. In OE, charitable giving is a minor virtue at best. Although Rand indicated that a person *should* help another or others during an emergency, she indicated that one *may* help others in need in cases of metaphysical non-emergencies so long as assistance is limited in scope and duration and the recipient is worthy of receiving it (Rand, 1964c, pp. 47-9)[3].

Inheritance in OE

A second type of voluntary unilateral transfer, the receipt of inheritance, does not have the moral stigma in OE that aims has – at least with a qualification[4]. That stipulation is that if one is the recipient of inheritance, he should make it productive (Branden, 1963, p. 23).

"Productive" in this context could be interpreted as meaning to increase the value of the estate (Peikoff, 1991, p. 391). This could be viewed as meaning that the heir should increase the capital value of his inheritance. Alternatively, "productive" could mean that, at the very least, the capital value should be kept intact. The later idea is in keeping with Adam Smith's conception of productivity:

> We should not call a marriage barren or unproductive, though it produced only a son and a daughter, to replace the father and mother, and though it did not increase the number of the human species, but only continued it as it was before (Smith, [1776] 1937, p. 639).

The notion of maintaining the value of capital is a primary tenet of economic theory (Simpson *et al.*, 1951, p. 263). This approach to inheritance – that is, that the heir should, minimally speaking, keep its value intact – is also consistent with the objectivist tenet that a person should not receive the unearned. According to Rand, if an individual consumes all of his earnings, he would break even economically. If he saves, he expands the capital base. If he consumes more than he earns, he is a parasite – regardless of whether he is on welfare or earns millions (Rand, 1982, p. 132). If he consumes all that he earns and draws on his inherited capital (the principal) as well, he is a parasite. To Rand, a man, if honest with himself, acknowledges that he cannot spend on consumer goods and services more than he earns from his productive effort (Rand, 1961a, p. 89). Translating this into economic terminology, when a person trenches on his inherited capital, his consumption exceeds the interest it has generated. In addition, he has also drawn down the capital base of the economy. In an economic sense, "by his existence, the world is diminished" (Touchstone, 2006, p. 249).

Capital value

In order to keep the capital value of an asset intact, the relevant income concept for the capital owner would be standard income, defined by Irving Fisher as that portion of income which would have to be *consumed* in order to maintain an asset's capital value (Fisher, [1906] 1965, p. 110, 116; 1930, p. 6). Standard income would be equal to the interest rate multiplied by the present value of the asset in the initial year. The present value (PV) would be given as $PV_t = \int_o^T Y_t e^{-rt}\,dt$, where Y_t is the income in year t and T is the life of the asset. Standard income would be an idealized perpetual annuity with the same present value as the asset. This assumes that a sinking fund equivalent to $S = PV(r)/(e^{rT} - 1)$ (Allen, 1967, p. 240) is set aside annually and accumulates interest compounded at rate r. Assumed also is that there are no unanticipated changes in the market (Fisher, [1906] 1965, pp. 396-7). By time T, the value of the accumulated sinking fund, $(S/r)(e^{rT} - 1)$, would equal the initial present value of the asset. As a numerical example, if Y per year were constant and equal to $1,000, r equaled 10 percent and T was ten years (and the discrete counterparts to the above equations were used), then the PV of the asset in the initial year would be $6,144.44, standard income would be $614.44, and the sinking fund per year would be $385.56[5].

According to my interpretation of OE, if an inheritor maintains or increases the value of his inheritance, he becomes morally worthy of it – but to what end? If its value remains intact or increases, to whom should it be bequeathed? Oftentimes, estates are left to family. However, this is not a foregone conclusion in OE. To Rand, the family is merely a cultural institution that often robs a person of his independence through the imposition of unjustified duties and guilt (Sciabarra, 1995, pp. 349-50; from Rand [June 1981], "The age of mediocrity," in Binswanger 2.3.5). In her article on patents, Rand indicated that once their duration had lapsed, their legitimate heirs were those who could keep them viable by making them productive (Rand, 1967a, p. 132). To extend this idea by way of analogy, those who should inherit property should be those who can best make it productive. "But who produces the producers?" (Touchstone, 2006, p. 249).

Human capital

Productivity may be approached from a number of perspectives. For an individual, one measure that reflects productivity is the income he derives from his "human capital." Human capital is commonly defined as the discounted value of a person's expected lifetime income; income, in this case, being that produced by "labor" as opposed to the return generated from physical assets. It could be argued that in some sense, income from any source – human or non-human – is a result of a person's effort. For the purposes here, income from human capital would apply to that income that a person would earn if he were initially endowed with no physical property.

Human capital theory credits investment in one's education and training for increasing a person's income earning potential. In his article "Human capital and the rise and fall of families," economist Gary Becker, indicated that parents have the option of investing in their children's human capital or investing in physical capital (Becker, 1995, pp. 358-9). This implies a broader definition of inheritance than is usually considered, and more importantly for this analysis, one at variance with the objectivist conception of inheritance.

Rand regarded a person as being "self-made"; both in wealth and in "soul" (by which she meant consciousness) (Rand, 1961a, p. 131). No doubt, this is the case for an adult. However, people do not emerge like Athena fully developed. As far as the content of one's consciousness, a human arrives *tabula rasa* (Rand, 1964a, p. 28). It is generally true that an adult is responsible for his behavior, but it is also the case that if a person has been reared with a good education, good values, and sufficiently nurtured and otherwise cared for, he is better equipped to make responsible decisions.

An article by Objectivist Nathaniel Branden claimed that children are entitled to at least some minimal care from their parents, which terminates at adulthood (Branden, 1962, p. 55). From the perspective of economic theory, this care, which would include physical as well as mental and moral development (for example, a work ethic), builds "human capital." According to OE, even though the child is entitled to care, he has no moral obligation to pay his parents in return for basic care once he becomes an adult. He may provide assistance to his parents but only if it is not burdensome or self-denying (Branden, 1962, p. 55).

I agree that a person is not obligated to repay his parents for the basic investment in human capital (particularly if it was during childhood and adolescence). If a parent was repaid for the total investment in the child's human capital, the parent would receive a twofold benefit. He would benefit from the full investment in his child's human capital as well as his parents' investment in his own human capital (Touchstone, 2006, p. 251)[6]. Becker's point is that a parent may look to physical assets for sources of income in their "golden" years, or, alternatively, invest in their children's education. He presents some evidence that the latter in some cases pays higher "dividends" (Becker, 1995, p. 358). However, if once an adult, a child is under no particular moral obligation to take care of his parents in their senior years, what (economic) incentive would there be for a parent to have children?

Human capital investment as an inheritance

Within the objectivist framework, a case for parenthood would seem to be a difficult one to make. Although viewed as potentially productive, parenting does not meet the primary requirement within OE of being self-preserving. Parenting would appear to be primarily unilateral. In that sense, it would seem similar to charity. However, according to OE, charity should be incidental and limited in duration (Peikoff, 1991, p. 386; Rand, 1964c, pp. 47-9). According to objectivist David Kelley, "the reasons why parents care for their children are more specific – and more powerful – than benevolence" (Bidinotto, 1996, p. 9).

If there is an "obligation" to have children, I would argue that it would be to replace the human capital investment made by a person's parents. If this investment is not replaced, a person would have effectively consumed in excess of his production over his lifetime. This would violate the "productivity principle." He would be in the position of defecting on an inter-generational exchange (Touchstone, 2006, p. 251). The investment by parents in their offspring's human capital is analogous to an investment in physical capital in that both potentially yield income earning "assets." The investment in a child's human capital can be viewed as an endowment in the same sense that physical capital is. That which is bequeathed to the child are the parents' time and other resources they devote to the development of their child's earning capacity (as well as other values, such as a code of ethics). This is equivalent to an endowment of physical capital, because instead the parents could have expended their resources on physical capital and bequeathed that. Either investment, in physical capital or in human capital, potentially enhances the income earning ability of the child.

Although knowledge, skills, and other values that may be regarded as comprising human capital are intangible (albeit, embodied), their provision demands the expenditure of resources. So long as a person has been the recipient of these intangibles and has not solely been responsible for their acquisition, he is a net beneficiary. If an heir of physical capital is on balance a net beneficiary and by maintaining or increasing its value becomes worthy of receiving it, then a similar case could be made that a person who receives an investment in his human capital should likewise maintain its value. This could be viewed as meaning that when a person reaches adulthood, he simply earns his income – he pays his own way, so to speak. This would appear to be what Rand meant by breaking even economically. However, if a person were to consume all of his return from his human capital, he would be trenching on the value of that capital by an amount equal to "depreciation." This would be the amount of depreciation reckoned on the value of his human capital in which uncompensated others (his parents) had invested[7].

Irving Fisher ([1906] 1965, p. 111) defined standard income as income less depreciation. Standard income would be the amount that would be consumed per year if a sinking fund were in fact set aside[8]. Fisher noted that to merely calculate the value of a sinking fund is not the same thing as saving it.

> If it were true that income could never trench on capital, we could not reckon a laboring man's wages as income without first deducting a premium or sinking fund sufficient to provide for the continuance of this income after the destruction by death of the laborer. [...] The $1000 annuitant who pays [$385.56] annually into a sinking fund is getting only [$614.44] annually, not $1000, for an income, and the laboring man who pays an insurance premium reduces his income by that amount. It surely makes a difference whether these "sinking funds" or "premiums" are actually set aside or merely reckoned. To reckon what one *ought* to save in order to maintain capital is not to save it, and a definition of income which depends upon an ideal reckoning instead of a real payment is to that extent inadequate (Fisher [1906] 1965, pp. 111-12).

If over the course of an income earner's life, a person consumes all of his income and does not set aside a sinking fund to collect interest, then he would be trenching on his human capital. If a sinking fund is saved, that would be regarded as replacement of the value of (human) capital. In order to keep the value of a physical asset intact, a sinking fund can be set aside annually and collect interest. Since individuals own themselves, there is no capital market for humans (nor should there be ethically); consequently, no sinking fund is reckoned and put aside to accumulate interest.

To the extent that a person has received a net benefit, then if he spends all of his (labor) income, he would not break even in an economic sense. In order to "carry one's own weight" a person could rely on a sinking fund to keep the value of his human capital investment "intact." For humans, this is unnecessary since a child is a person's replacement capital. To accumulate a sinking fund and have a child would be to doubly replace one's human capital (Touchstone, 2006, p. 254). According to OE, in order for a person to avoid being an economic drain, a person's consumption must at least match his production (over the course of his life). From the perspective of a person's "labor income," simply matching his consumption to that income would be insufficient. He would have to earn enough to support his own consumption as well as replace the human capital investment made by uncompensated others.

The permanent income hypothesis

Standard income is uniform if a sinking fund is set aside. It is the income concept relevant for making decisions for physical capital replacement. Standard income would not be the relevant concept for human capital replacement if a person had a child since a sinking fund would be redundant. The replacement of human capital is an asset decision, and as such it is based on income over the course of one's life (Touchstone, 2006, p. 344). However, expenditures on one's children are classified largely as household consumer expenditures, not investment. It could be argued that the relevant income concept in making decisions in this regard would be Milton Friedman's permanent income[9].

Milton Friedman's permanent income hypothesis (PIH) states that consumption decisions are based on permanent income. That is, consumer spending decisions are based on the income received over the course of a lifetime. The PIH is not a normative theory. Friedman was not arguing that individuals should base their consumer decisions on permanent income, but that the PIH explains empirical observations concerning consumer behavior. For instance, one of those observations is that consumer spending tends to be relatively more stable over time than actual income (as well as actual investment)[10]. Current income has "transitory" components. Transitory income is the result of temporary changes in income due to "'accidental' or 'chance' occurrences" (Friedman, 1957, p. 22). It "is the difference between current and lifetime income" (Ramrattan and Szenberg, 2008, p. 33). Examples of transitory income would include income received as a result of a temporary income tax reduction or a bonus received at work. Of course, transitory income may be negative as well.

The objectivist position is that luck – whether good or bad – is incidental in making ethical decisions and when deriving an ethical code. Ethical decisions should be long range in nature. Ethical principles should be derived based on long-run success. A person may do the wrong thing – say, steal – yet he still may be successful. If so, the thief has been "lucky." An ethical principle based on stealing would not be tenable, however, because ethics should not be based on luck. Similarly a person may do the right thing and still fail due to misfortune. Nevertheless, if a person persists in ethical behavior, the expectation is that he will succeed. This is the essence of the BUP. This could be interpreted to mean that if a person acts ethically, the long run probability of success is high (for instance, see Merrill, 1991, pp. 115-17; Touchstone, 2008b). The corresponding probability of failure is low, and failure, if it occurs, would be due to exogenous factors (that is, not attributable to the decision-maker as such). The long-run probability of failure for unethical behavior is not low and is a function of the actions of the decision maker. Thus, setbacks are possible, but when making an ethical decision, these are regarded as incidental. In other words, the temporary or transitory should not form the basis for making decisions. The emphasis on the long range and the de-emphasis of the temporary or incidental, which characterize the PIH and its relevance to consumer decisions, complement the salient features underpinning the decision considered here, rendering permanent income appropriate for this decision.

Although there are conceptual overlaps, I am not making a moral case for the use of permanent income in decision making. Permanent income, *per se*, has no moral content. In OE, if a person acts ethically, loss is the unexpected because ethical principles are derived based on long-range success. Failure is a possible outcome of an ethical decision, but it is stochastic in nature. Transitory income is temporary, but it may or may not be "stochastic" in the sense used in OE. A person may have a temporary decline in income because he has made a decision that was (ethically) wrong – for instance, he was discovered by the public to have intentionally defrauded them about his product and this adversely affected his sells. This would be different from having a downturn in income due to, say, an act of nature that resulted in a temporary shut down in a person's business operations. OE makes a distinction between these two types of income losses. The objectivist position would be that in the former case, the loss might be temporary (if the person subsequently regained the public's goodwill), but it would not have been entirely "unexpected." The loss in income in the second example might also be temporary, but it would not have been due to the actions of the income earner[11]. The PIH makes no explicit distinction between the two losses, and both might be regarded as "transitory." Although Friedman viewed transitory components as reflecting "chance" occurrences, he also acknowledged that from another perspective, they may be predictable (Friedman, 1957, p. 22); for instance, the result of cyclical factors. The "predictability" to which Friedman referred was related to economic factors, not poor ethical judgments that had economic implications. Nevertheless, the point is that there may be some elements of predictability in transitory components in the PIH. Permanent income is a positive concept that may be relevant in making normative decisions, such those related to human capital replacement discussed here.

Intergenerational PD

The idea that human capital is replaced through reproduction is not a new one, but the reasoning for it has been assigned to maintaining the species or the capital base of the economy. Alfred Marshall viewed it through an economic lens, saying: "The most valuable of all capital is that invested in human beings; and of that capital, the most precious part is the results of the care and influence of the mother" (Marshall, 1930, p. 564; quoted in Pujol, 1992, p. 126). To Marshall, if a mother had to forego a career to tend to her children, she would have given up the monetary return to her own human capital. Because of this, Marshall commented that to mothers, virtue is "for the greater part its own reward" (Marshall, 1930, p. 564; quoted in Pujol, 1992, p. 128). In OE, virtue is not regarded as its own reward (Rand, 1961a, p. 131). Marshall's perspective speaks to self-denial. However, the sting of this apparent injustice is neutralized once a child is viewed as a person's replacement capital. The inconsistency that parenting is a productive endeavor that has no payoff is cast anew. According to OE, the heir of a family business would become worthy of it by leaving its value intact or increasing it. This effort would not be seen as unproductive or sacrificial.

When a parent invests in his child's "human capital," this potentially yields an income above what the child would earn if he were to rely solely on himself. This investment can be viewed as maintenance in the same way that maintaining the value of a physical asset that was inherited – such as a family business. A person engages in investment to receive a return in the future. From an egoist's point of view, parenting seems self-sacrificial because it is the child who reaps the return. When viewed prospectively, parenting would seem to be an irrational undertaking. However, it must also be perceived retrospectively (Touchstone, 2006, p. 255).

Rand's dictum that to consume, a man must produce applies to adults. The question is, how does a person become an adult? For most adults, there are those who provided for his subsistence as well as expending resources to develop his earning potential and his character. Rand pointed out that production must precede consumption (Rand, 1961b, p. 80). But from the perspective of a person's life, consumption must take place before production, and it does so for a number of years. In reality, production must occur before consumption. During a person's formative years, others are doing the producing – typically one's parents (Touchstone, 2006, p. 255).

The decision to maintain one's human capital can be viewed as having the incentive structure of a PD, in that, once a person receives his own human capital investment *vis-à-vis* his parents, there may be the temptation to default. There is some evidence of this kind of "default" in more developed countries as the opportunity cost of women's time has increased, since child-rearing is non-remunerative and investing in children's human capital to some extent is seen as competing with women's. Childbirth is less than replacement in many of these countries (SPSS, 1999; *The Economist*, 2007).

Maintenance of value in perpetuity

In the passage by Irving Fisher quoted above, it is mentioned that a laborer may maintain his capital value either by setting aside a sinking fund or by paying a life insurance premium[12]. In theory, life insurance is purchased to maintain the value of a person's human capital in the case of untimely death. Economists have noted that it is when a parent's children are dependent that the bequest motive on which insurance purchase is based has the greatest weight. Insurance primarily protects untimely death. It exists largely because life is uncertain, not because it is finite. Depreciation results due to the finiteness of life. It would exist whether life's duration was certain or not (Touchstone, 2006, p. 273).

Insurance may protect the value of a policyholder's human capital due to untimely death, but as far as replacing the value of a person's human capital (as would be done with a sinking fund for physical capital), it is one's child or children. This notion – that human capital is replaced through reproduction – is assumed in steady state economic growth models (for which the population/labor force remains constant). According to an early work of F.P. Ramsey: "[E]ach man is charged with a share of that maintenance of such children as are necessary to maintain the population, but starts his working life without any capital and ends it without any, having spent his savings on an annuity" (Ramsey, 1928, p. 557). That is, both human and physical capitals are assumed unchanged.

For any asset (human or non-human) that begins with a present value of a given amount – for purposes of simplification and continuity, assume that value is $6,144.44 – then given consumption of $1,000 per year, the value of the asset by the end of its life would be zero. Alternatively, by consuming only the standard income of $614.44 and setting aside savings of $385.55 per year indefinitely, the asset would be maintained perpetually; that is, it would have an infinite life. By way of analogy, reproduction could be viewed as an attempt to achieve "immortality." Rand did not subscribe to the notion of immortality (Berliner, 1995, p. 397).

Humans are mortal by nature. Children may be viewed as a replacement for human capital, from a purely economic point of view. This does not imply that this is a reason for reproducing. It becomes an ethical justification once it is combined with the trader principle (Touchstone, 2006, p. 256). As a reason for procreation, the maintenance of human capital argument is consistent with OE, because it reflects the trader principle as viewed from one's entire life. If concentration were on the adult stage of a lifetime, then a person might be regarded as carrying his own economic weight if he merely consumed all of his income; that is, if he consumed all of his income from human capital plus the return from his physical capital, so long as he maintained the capital value of the later, if inherited. However, on balance this would yield a net loss. If instead this statement were recast to read that a person would economically break even if his consumption did not exceed his standard income (from all capital sources, including human), then this would be more in keeping with the trader principle, so long as a sinking fund (for each source of capital) were put aside.

That is, an individual could pay into a sinking fund to accumulate interest so that at his life's end it would have the same value as his capital. For non-human capital, this does not mean that the estate itself would remain unchanged. For example, if a person inherited a family business he would not be restricted to keeping the business exactly the same. From an ethical standpoint, the idea of maintaining the value of the estate is that a person would do his best not to intentionally draw down the value of the estate that he inherited. For human capital, this would result in the replacement of the investment by non-compensated others (one's parents). However, human capital is embodied. To maintain one's own human capital, one would need to procreate and invest in one's child. A sinking fund, *per se*, would be unnecessary. If a person does have a child, the relevant income concept for human capital replacement would not be standard income. Of course, if a person has a child, this does not mean identically replacing the skills, information, and other values that a person has acquired. Like non-human capital, this investment need not be narrowly defined.

Similarly if a person does not have children himself, there are outlets for this "investment." A person could devote some part of his time and/or other resources in the human capital development of others. This would not necessarily be limited to unilateral investment in labor productivity narrowly defined. Human capital formation, from an economic perspective, focuses on earning power; however, from a human development perspective, it includes far more. It is not limited to training or even education as it relates to income potential. It includes other values and principles – not simply those related to the work ethic. Nor is a person who undertakes such an investment necessarily constrained to devote his time and resources to individuals, *per se*. He may, alternatively, leave a legacy, say, to an institution of learning. There are any number of possibilities that might suffice. The point is that the replacement investment would in turn be embodied in another or others, since that is the nature of human capital.

Embodiment and values

By definition capital must take tangible form[13]. Knowledge, according to objectivist Leonard Peikoff, cannot be considered productive until it takes physical form; until it becomes embodied. By this, Peikoff meant embodied in inanimate form. In the same vein, Rand referred to a machine as a "frozen form of a living intelligence" (Rand, 1957, p. 1064). What then of the human "form of living intelligence"? Is that, too, not a value? It is the charge of parents to produce that value. Values, such as Rand's cardinal values, are embodied in human beings. Humans are tangible, just as are machines. Humans create the machines that in turn embody living intelligence. Furthermore, although machines and other non-living objects may have value, they cannot, like humans, value. Machines have no volition. They cannot possess values or virtues. Moral principles and other intangible values can only be transferred to other beings, not to inanimate objects. Only living creatures can embody values. Only humans can embody virtues. "Virtues and values cannot be, unless they are embodied" (Touchstone, 2006, p. 257).

When a person ceases to be, his virtues and values perish with him. It has been argued here, that there is a moral imperative that he maintains them by replacing them. This is in his self-interest. That is, if he values moral principles and other values, he recognizes that they are mortal. To exist, they must be embodied in some tangible form, specifically, human beings. A person may set aside a sinking fund to replace the value of his human capital, but if that is not in turn embodied in another person or persons, it cannot be.

Principles can be expressed in written form, but in order to be sustained they must be acted upon. They, like living beings, may die. To survive, they must be affirmed. To be affirmed, they must be embodied in human beings. Unlike the mortality of a moral principle – which is a possibility – the death of a human is an inevitability. A person will die, but his moral principles and other intangible values need not.

This does not mean that a person should be forced to replace his human capital or keep its value intact just as he should not be forced to keep the value of anything else he inherits intact or forced to keep himself intact. It is a question of whether it is the ethical thing to do. By examining one's life in its entirety, rather than focusing on the adult stage alone, I would argue that it is.

The maintenance of one's moral values and other intangible values beyond one's life may be viewed as a unilateral transfer, if a person focuses narrowly on his adult life. As such, it may have the appearance of a sacrifice or a gift. From the perspective of a person's entire life, it is a reciprocal action to keep intact that which has been given by those who have not been (entirely) compensated. "As such, it is not a gift one is giving; it is a value one is maintaining" (Touchstone, 2006, p. 258).

Completing the circle

I have argued that reproductivity is sufficiently different from productivity to be a separate category. I have also made the case that, a person should replace the human capital investment made by uncompensated others (typically, parents) – which is an argument for reproduction. It could be said, however, that I have failed to make the case that reproductivity is a primary value. It would appear to be derivative – based on the "productivity principle" as applied to the entirety of a person's life. Is this simply a question of "which came first"? In response:

> Concerning production, Rand said: "Men have been taught that the highest virtue is not to achieve, but to give. Yet one cannot give that which has not been created. Creation comes before distribution – or there will be nothing to distribute" (Rand, 1961b, p. 80).
>
> Production is the precondition of consumption. It must come first. But could one not equally say: "That which one values is not procreation but one's life. Yet one cannot live unless procreation has taken place. Procreation comes before life – or there would be no life to live" (Touchstone, 2006, p. 35).

Life may be a person's ultimate value, but without procreation he would not exist. Procreation would seem to be primary. However, the counter-argument is that even though reproduction is necessary for a person to "come to exist," it is not required for the continuance of one's life. But the same could be said for the need to produce if a person were independently wealthy – for instance, if he had received a significant inheritance. Productivity may have been required to sustain that person's life, but his own productive effort would not appear to be required. Yet productivity is a primary value in OE. It is the objectivist position that a person should be productive even if he were independently wealthy. The reason is that, even if one's physical needs were satisfied, productivity is a psychological need. Productive work is necessary to anchor and prioritize a person's other values (Peikoff, 1991, p. 301). Without work, a person would be psychologically at sea.

To the extent that production is a pre-condition for consumption, reproduction is likewise a pre-condition for production. Insofar as it being a pre-condition, it is, in that regard, more basic than production. If the objectivist position that work fulfills a psychological need is tenable, then, even if reproductivity is not "needed" to sustain a person's physical existence, since it is a value more basic than productivity, it, too, satisfies a psychological need. It would seem to follow that, as with productivity, reproductivity would be a cardinal value (Touchstone, 2006, p. 36).

Notes

1. Gary Becker (1995, pp. 242-3, 256) regards children as durable consumer goods. Whether this is the case for parents or not, it is still the case that parents invest in their child's or children's human capital.
2. In addition to charity and inheritance, the receipt of gifts is also an exception singled out for discussion in OE. According to Objectivist philosophy, the motivation for gift-giving is the joy it brings the giver. The enjoyment of the recipient is a secondary consideration (Kelley, 1996, pp. 44-5).
3. It could be argued that within OE, charity is not even a minor virtue. Although charity is regarded as being acceptable if it is reasonable and non-sacrificial (Peikoff, 1991, p. 386), any action that does not serve one's own life is considered at least mildly self-sacrificial (Peikoff, 1991, p. 232; Kelley, 1996, p. 7). It would follow that any sacrifice, however small, would be wrong. This coupled with the position that, according to OE, ethical principles are necessarily either-or, which means that there is no trade-off between right and wrong (Peikoff, 1991, p. 273), would imply that any contribution to charity could be categorized as a vice instead of a virtue. In *Athena*, I argue that charity need not be self-sacrificial (Touchstone, 2006, pp. 326-41; see Note 11 below). I also suggested that it could be regarded as a major virtue rather than a minor virtue (Touchstone, 2006, p. 348).
4. Because others are secondary in OE, principles that deal with others are not primary in OE. The giving of inheritance follows from the right of the endower to his own property. Although the giving of charity may be regarded as a minor virtue in OE, the bequest of an inheritance to one's heirs has no moral content. It could be considered on par with consumer spending.
5. Fisher also referred to income as "realized" income (Fisher, [1906] 1965, p. 235) and standard income as "earnings" (Fisher, [1906] 1965, p. 333). Fisher identified income with consumption. In this way, saving is not considered part of income, but an addition to capital (Fisher, [1906] 1965, pp. 135, 248-9, 254-5). He also claimed that it is income that is received ($1,000 per year in the numerical example), rather than standard income, that is the relevant income concept for determining the present value of the asset because that is the amount that is discounted and summed over the lifetime of the asset. Identifying consumption with income can lead to conceptual difficulties if a sinking fund ($385.56) is indeed saved and put aside, since in that case only $614.44 (standard income) would be consumed. "Income" defined as consumption cannot simultaneously be equal to $1,000 and $614.44. The income received of $1,000 (consumption *plus* saving) would

have to be recognized as income. By calling consumption "consumption" rather than income, this confusion is avoided.

6. The Objectivist position is that a child is under no particular obligation to help his parents if they are in need, although he may do so if it is not self-sacrificial or too burdensome. I agree that a parent would not want a child to devote his life to his parents. It would be a contradiction to give a person life and then claim it for one's own purposes. However, my position is not as limited as the objectivist view. I think that if a parent is in need and is deserving, an adult child has an obligation to provide assistance even if it required some sacrifice; although not sacrifices of principle. I also think that children should pay back parents for education and training that was received when the children were adults and could potentially have been self-supporting. However, to pay parents for investment in basic human capital received as a child and as an adolescent would result in the parents doubly benefiting (from their parents' investment and from their children) (Touchstone, 2006, p. 251). This would violate the "productivity principle." It would also be inconsistent with the concept of replacement capital for two reasons. One is that replacement investment must be embodied in humans. If the payment is made to the parents, and they do not in turn invest in human capital this would not result in replacement. Also, a defining characteristic of replacement capital is that it is forward looking; it has an expected life beyond one's own, as is typically characteristic of one's children, but not one's parents.
7. Using Irving Fisher's definition of depreciation as the difference between the present value of the asset at successive dates (Fisher, [1906] 1965, p. 235), the equation for depreciation would be: $D_t = PV_t r/[e^{r(T+1-t)} - 1]$. Assuming that nothing is set aside for replacement and there are no unexpected changes in the market, then depreciation would increase each year over the life as the asset.
8. If a sinking fund is actually set aside then depreciation would be constant and equal in value to the sinking fund.
9. Permanent income is a constant stream of income that once compounded at interest rate, r, will equal wealth, M, in year T (Yaari, 1964, p. 312). (Menahem Yaari also noted that M. J. Farrell's normal income is analogous to Friedman's permanent income.) Written in terms of M, the equation for permanent income would be:

$$Y_p(t) = rM/(e^{rT} - 1),$$

where

$$M = (Y/r)(e^{rT} - 1).$$

Permanent income can also be represented in terms of the asset's PV:

$$Y_p = r(PV)/(1 - e^{-rT}).$$

Writing standard income (Y_s) in terms of permanent income (Y_p) gives:

$$Y_s = (1 - e^{-rT})Y_p.$$

(Yaari (1964, p. 312) referred to standard income as Hick's income.)

10. Friedman derived the theory to resolve the observed differences in estimates of short-run and long-run marginal propensities to consume out of income. Estimates of permanent income have used distributed lag methodology (Ramrattan and Szenberg, 2008, p. 33). There have been numerous empirical studies that have been based on the PIH (for example Doenges, 1966; Holbrook and Stafford, 1971; Christiano, 1987). The purpose here is to highlight the conceptual parallels between the PHI and elements of OE, and to point out that the PHI is not inconsistent with decision making in the context considered here.

11. When making ethical decisions, I do not mean to imply, however, that current income or temporary conditions should not or should never be taken into account. In *Athena*, I suggested that in making decisions having to do with charitable contributions, misfortune may be relevant in deciding how much or whether a person should give. I derived a rule-of-thumb for charitable giving based on the BUP, the fundamental alternative, and decision theory under uncertainty (risk). This heuristic is based on how much a person should give, not on how much individuals actually give to charity. The gist of the rationale underlying the heuristic is that for any given year, success is the expected and failure is the unexpected. In OE, the measure of success is one's life. Therefore, I used the probabilities of dying and surviving to indicate probabilities of failure and success. If a person survives, the expected loss associated with that event (the probability of dying multiplied by one's income for that year) would be "unexpected" and incidental. As such, it would not be a "sacrifice" to give that amount to charity. The amount given is based on ex ante information – what a person's expectations are. Most decisions are based on prior expectations. However, the contribution to charity as I proposed it would be "after the fact." If one has not survived the year, he would not make a charitable contribution. If he survives, he would contribute based on a calculation of the expected loss for the *past* year (Touchstone, 2006, pp. 341-7; Touchstone, 2008a). The probability of dying used in determining the expected loss is based on a "permanent" probability of dying that I derived, and as such would remain relatively stable from year to year (2006, pp. 273-5). There are sources of "luck" and "misfortune" other than surviving and dying, however. If a person has had a particularly unfortunate year, then it may be acceptable for him to refrain from any charitable giving. In other words, even though the percentage (probability) may be fairly constant from year to year, the individual would still take into consideration transitory losses in income. That is, for the decision to give to charity, current income would be relevant. (Also of significance could be other unforeseen expenditures related to misfortune and the extent to which they might affect discretionary spending.)
12. A life insurance premium is not equivalent to a sinking fund. A life insurance premium equal in value to a sinking fund based on the level premium concept would be insufficient to honor life insurance claims (Touchstone, 2006, p. 392).
13. Objectivist Leonard Peikoff too narrowly defined the form that production can take. For instance, he excluded services, limiting productivity to "the creation of *material* values" (1991, p. 293; emphasis in original). Of more relevance to this discussion, he defined wealth to the exclusion of human capital.

References

Allen, R.G.D. (1967), *Mathematical Analysis for Economists*, St Martin's Press, New York, NY.

Axelrod, R. (1984), *The Evolution of Cooperation*, Basic Books, New York, NY.

Becker, G.S. (1995), "Human capital and the rise and fall of families", in Febrero, R. and Schwartz, P.S. (Eds), *The Essence of Becker*, Hoover Institution Press, Stanford, CA.

Berliner, M.S. (1995), *Letters of Ayn Rand*, Dutton, New York, NY.

Bidinotto, R. (1996), "The roundtable", *IOS Journal*, Vol. 6 No. 4, pp. 6-10.

Binswanger, H. (Ed.) (1986), *The Ayn Rand Lexicon*, New American Library, New York, NY.

Branden, N. (1962), "What are the respective obligations of parents to children, and children to parents?", *The Objectivist Newsletter*, Vol. 1 No. 12, p. 55.

Branden, N. (1963), "Intellectual ammunition department: does inherited wealth give some individuals an unfair advantage in a competitive economy?", *The Objectivist Newsletter*, Vol. 2 No. 6, pp. 22-3.

Christiano, L.J. (1987), "Why is consumption less volatile than income?", *Federal Reserve Bank of Minneapolis Quarterly Review*, Vol. 11 No. 4, pp. 2-20.

Doenges, R.C. (1966), "Transitory income size and savings", *Southern Economic Journal*, Vol. 33 No. 2, pp. 258-63.

(The) Economist (2007), "How to deal with a falling population", *The Economist*, 28 July-3 August, p. 11.

Fisher, I.N. (1930), *The Theory of Interest*, Macmillan Co., New York, NY.

Fisher, I.N. [1906] (1965), *The Nature of Capital and Income*, Sentry Press, New York, NY.

Frank, R.H. (1988), *Passions Within Reason*, W.W. Norton & Company, New York, NY.

Friedman, M. (1957), *A Theory of the Consumption Function*, Princeton University Press, Princeton, NJ.

Holbrook, R. and Stafford, F. (1971), "The propensity to consumer separate types of income: a generalized permanent income hypothesis", *Econometrica*, Vol. 39 No. 1, pp. 1-21.

Kelley, D. (1996), *Unrugged Individualism*, Institute for Objectivist Studies, Poughkeepsie, NY.

Mack, E. (1986), "The fundamental moral elements of Rand's theory of rights", in Den Uyl, D.J. and Rasmussen, D.B. (Eds), *The Philosophic Thought of Ayn Rand*, University of Illinois Press, Urbana, IL and Chicago, IL.

Mack, E. (1998), "On the fit between egoism and right", *Reason Papers*, Vol. 23, Fall, pp. 3-21.

Marshall, A. (1930), *Principles of Economics*, Repr. of 8th ed., Macmillan, London; Guillebaud edition, Macmillan, London, 1961, quoted in Pujol 1992, p. 128.

Merrill, R.E. (1991), *The Ideas of Ayn Rand*, Open Court, LaSalle, IL.

Merrill, R.E. (1997), "Objectivist ethics: a biological critique", *Objectivity*, Vol. 2 No. 5, pp. 67-93.

Paterson, I. (1968), *The God of the Machine*, The Caxton Printers, Caldwell, ID.

Peikoff, L. (1976), *The Philosophy of Objectivism*, Lecture Series No. 8, in Binswanger, H. (Ed.) (1986), *The Ayn Rand Lexicon*, New American Library, New York, NY, pp. 50-1.

Peikoff, L. (1991), *Objectivism: The Philosophy of Ayn Rand*, Dutton, New York, NY.

Pujol, M.A. (1992), *Feminism and Anti-feminism in Early Economic Thought*, Edward Elgar Publishing, Aldershot.

Ramrattan, L. and Szenberg, M. (2008), "Memorializing Milton Friedman a review of his major works", *American Economist*, Vol. 52 No. 1, pp. 23-38.

Ramsey, F.P. (1928), "A mathematical theory of saving", *Economic Journal*, Vol. XXXVIII No. 152, pp. 543-59.

Rand, A. (1957), *Atlas Shrugged*, Random House, New York, NY.

Rand, A. (1961a), *Atlas Shrugged*, Signet, New York, NY.

Rand, A. (1961b), *The Fountainhead*, Signet, New York, NY.

Rand, A. (1964a), *The Objectivist Ethics*, Signet, New York, NY.

Rand, A. (1964b), A.Toffler's Playboy interview with Ayn Rand: a candid conversation with the fountainhead of "objectivism", *The Objectivist*, New York, NY, reprint.

Rand, A. (1964c), *The Ethics of Emergencies*, Signet, New York, NY.

Rand, A. (1964d), *The Nature of Government*, Signet, New York, NY.

Rand, A. (1967a), *Patents and Copyrights*, Signet, New York, NY.

Rand, A. (1967b), *What is Capitalism*? Signet, New York, NY.

Rand, A. (1968), "Of living death (II)", *The Objectivist*, Vol. 7 No. 10, pp. 1-6.

Rand, A. (1982), *Egalitarianism and Inflation*, Signet, New York, NY.

Sciabarra, C.M. (1995), *Ayn Rand: The Russian Radical*, The Pennsylvania State University Press, University Park, PA.

Simpson, T.M., Pirenian, Z.M. and Crenshaw, B.H. (1951), *Mathematics of Finance*, 3rd ed., Prentice-Hall, Englewood Cliffs, NJ.

Smith, A. [1776] (1937), *The Wealth of Nations*, The Modern Library, New York, NY.

SPSS® Base 10.0 (1999), *Application Guide*, SPSS, Chicago, IL.

Stoloff, M. (2000), "A guide to Rand scholarship", *The Journal of Ayn Rand Studies*, Vol. 1 No. 2, pp. 333-44.

Stoloff, M. (2001), "A guide to Rand scholarship – II", *The Journal of Ayn Rand Studies*, Vol. 3 No. 1, pp. 171-80.

Touchstone, K. (2006), *Then Athena Said: Unilateral Transfers and the Transformation of Objectivist Ethics*, University Press of America, Lanham, MD.

Touchstone, K. (2008a), "Ethical principles, charity, and a criterion for giving", *Reason Papers*, Vol. 30, pp. 37-58.

Touchstone, K. (2008b), "Economic decision-making ethical choice", *The Journal of Ayn Rand Studies*, Vol. 10 No. 1, pp. 171-91.

Walker, J. (1999), *The Ayn Rand Cult*, Open Court, LaSalle, IL.

Wheeler, J. (1986), "Rand and Aristotle: a comparison of objectivist and aristotelian ethics", in Den Uyl, D.J. and Rasmussen, D.B. (Eds), *The Philosophic Thought of Ayn Rand*, University of Illinois Press, Urbana, IL and Chicago, IL.

Yaari, M.E. (1964), "On the consumer's lifetime allocation process", *The International Economic Review*, Vol. 5 No. 3, pp. 304-17.

Further reading

Den Uyl, D.J. and Rasmussen, D.B. (Eds) (1986), *The Philosophic Thought of Ayn Rand*, University of Illinois Press, Urbana, IL and Chicago, IL.

Febrero, R. and Schwartz, P.S. (Eds) (1995), *The Essence of Becker*, Hoover Institution Press, Stanford, CA.

Rand, A. (1961), *For the New Intellectual*, Signet, New York, NY.

Rand, A. (1964), *The Virtue of Selfishness*, Signet, New York, NY.

Rand, A. (1967), *Capitalism: The Unknown Ideal*, Signet, New York, NY.

Rand, A. (1982), *Philosophy: Who Needs It*, Signet, New York, NY.

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