Fairness and the Consumption Tax

Barbara H. Fried*

I. INTRODUCTION

For over a century, tax scholars and economists have debated the merits of replacing the existing income tax with a tax on consumption. While a traditional accretion-type, or Haig-Simons, income tax taxes annual increases in an individual's wealth from labor and capital, whether saved or consumed,[1] a consumption tax taxes annual consumption only, whether financed out of current earnings, accumulated savings, or funds borrowed against future earnings. Proposals for a consumption tax have taken two basic forms. The first, a cash-flow tax, taxes annual consumption directly, through an income tax on current earnings (both wages and income from capital), with a deduction for savings. The effect of a cash-flow tax is thus to tax all earnings, but to defer taxation until they are spent on personal consumption. The second basic form, the yield-exempt version, taxes wage income in full as earned, whether saved or consumed, but exempts all income from capital. Under a plausible set of assumptions, the two forms of consumption tax—a tax on consumption only and a tax on wages only—impose an equivalent tax burden in present value terms.[2]

Over the years, proponents have pointed to a number of advantages of a consumption tax. These benefits include efficiency gains that result from

1. More formally, following the formulation given by Henry Simons, annual taxable income under an accretion tax is defined as the "algebraic sum of (1) the market value of rights exercised in consumption and (2) the change in the value of the store of property rights between the beginning and end of the period in question." HENRY C. SIMONS, PERSONAL INCOME TAXATION 50 (1938).

2. The equivalence can be illustrated by the following example. A taxpayer earns $100 in wages in year 1, intending to defer consumption of the earnings until year 2, and earning 10% interest on the savings. At a 40% tax rate, under the yield-exempt version of the tax, the taxpayer will pay $40 in year 1, leaving him with $60 after-tax to save. At a 10% interest rate, the $60 will grow to $66 by year 2, and all of this sum will then be available for consumption. Under a cash-flow version, the taxpayer will pay no tax in year 1, investing the full $100. This investment will yield $110 in year 2, of which the government will take $44, leaving the taxpayer with $66 to spend. For a discussion of the conditions that must obtain for the equivalence to hold, see Michael J. Graetz, *Implementing a Progressive Income Tax*, 92 HARV. L. REV. 1575, 1600-11 (1979). The most significant conditions are: first, that tax rates remain constant across time and across income levels, so that (in the above example) $100 today is taxed at the same nominal rate as $100 plus accrued interest in the year of consumption; and second, that consumption not be deferred indefinitely (for example, through a series of bequests that go unspent).

eliminating the deadweight loss from a tax on savings;[3] a boost in national productivity from increasing the national savings rate;[4] the impossibility of ever administering a conceptually pure income tax, contrasted with the administrative simplicity of a pure consumption tax;[5] and the greater fairness of a consumption tax to savers. This article will deal only with the last of these supposed advantages—the question of fairness.

Two general arguments have been made on behalf of the greater fairness of a consumption tax. Each of these arguments mimics in structure one of the two basic forms of the proposed consumption tax schemes. The first, mimicking the structure of the cash-flow tax, is the so-called "foundational" argument. This argument, which is usually traced back to Hobbes, asserts that wealth ought not to be regarded as appropriated for private purposes until withdrawn for personal use from the "common pool" of national savings.[6] Under the Hobbesian view, a "fair tax" is defined simply as a tax that applies only to personal consumption. As critics have noted, the argument is open to attack for ignoring the psychic benefits in the form of power, influence, security, and the like that come from the mere possession of wealth.[7]

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3. A brief but useful summary of the recent economic literature on welfare gains from a consumption tax can be found in John Whalley, *Lessons from General Equilibrium Models, in* UNEASY COMPROMISE: PROBLEMS OF A HYBRID INCOME-CONSUMPTION TAX 15, 36-37 (Henry J. Aaron, Harvey Galper & Joseph A. Pechman eds., 1988). For more detailed discussions in the economic literature, see Alan J. Auerbach, Laurence J. Kotlikoff & Jonathan Skinner, *The Efficiency Gains from Dynamic Tax Reform,* 24 INT'L ECON. REV. 81 (1983); Martin Feldstein, *The Welfare Cost of Capital Income Taxation,* 86 J. POL. ECON. S29 (1978); Lawrence H. Summers, *Capital Taxation and Accumulation in a Life Cycle Growth Model,* 71 AM. ECON. REV. 533 (1981). Efficiency gains from reducing the distortion in intertemporal choices will obviously be offset at least in part by efficiency losses from whatever tax makes up the revenue shortfall—in all likelihood an increase in the wage tax. Estimates of the net efficiency gains from a consumption tax, taking into account the effects of substitute taxation, have varied widely. Summers has estimated the welfare loss from an income tax to be as much as 10% of GNP. Summers, *supra,* at 543. Most other scholars have put the figure considerably lower. *See, e.g.,* E. Philip Howrey & Saul H. Hymans, *The Measurement and Determination of Loanable-Funds Saving, in* WHAT SHOULD BE TAXED: INCOME OR EXPENDITURE? 1 (Joseph A. Pechman ed., 1980); Auerbach et al., *supra,* at 94.

4. *See* Michael J. Boskin, *Taxation, Saving, and the Rate of Interest,* 86 J. POL. ECON. S3 (1978); Martin Feldstein, *Does the United States Save Too Little?,* 67 AMER. ECON. REV. 116 (1977). For earlier expressions of this view, see IRVING FISHER & HERBERT W. FISHER, CONSTRUCTIVE INCOME TAXATION: A PROPOSAL FOR REFORM 61-91 (1942); A.C. PIGOU, A STUDY IN PUBLIC FINANCE 96-99, 121 (3d ed. 1962).

5. For strong endorsements of a consumption tax as preferable to an inevitably imperfect income tax, see, for example, David F. Bradford, *The Case for a Personal Consumption Tax, in* WHAT SHOULD BE TAXED: INCOME OR EXPENDITURE?, *supra* note 3, at 75, 102-09; NICHOLAS KALDOR, AN EXPENDITURE TAX 44-46, 74-75 (1955); U.S. DEP'T OF TREASURY, BLUEPRINTS FOR BASIC TAX REFORM 44-45 (1977) [hereinafter BLUEPRINTS]; William D. Andrews, *A Consumption-Type or Cash Flow Personal Income Tax,* 87 HARV. L. REV. 1113, 1133-39, 1143 (1974).

6. *See* THOMAS HOBBES, LEVIATHAN 266-67 (Clarendon Press 1958) (1651). Hobbes's version of the argument runs as follows:

> [T]he Equality of Imposition consisteth rather in the Equality of that which is consumed, than of the riches of the persons that consume the same. For what reason is there, that he which laboureth much, and sparing the fruits of his labour, consumeth little, should be more charged, than he that living idlely, getteth little, and spendeth all he gets; seeing the one hath no more protection from the Common-wealth, than the other?

Id. at 267. For modern endorsements of the foundational argument, see CHARLES FRIED, RIGHT AND WRONG 147-50 (1978); N. KALDOR, *supra* note 5, at 53; Andrews, *supra* note 5, at 1164-67.

7. *See, e.g.,* HAROLD M. GROVES, TAX PHILOSOPHERS 109 (Donald J. Curran ed., 1974) (sug-

It is also open to attack on the ground that the power to direct investment of one's savings as one sees fit to further private, as opposed to public, ends is a form of private appropriation.[8] The foundational argument raises a number of other problems as well, and an adequate treatment of it has yet to be undertaken.

For present purposes, however, I intend to set the foundational argument aside, and focus only on the second argument, the object of scholarly debate for the past century. Mimicking the structure of the yield-exempt tax, the second argument seizes instead on the unfairness of taxing returns to capital per se. The article will suggest that this argument is not one but three, resting implicitly on three radically different and mutually inconsistent notions of fairness: (1) that returns to capital should be exempted as a means of perfecting the income tax; (2) that they should be exempted as a means of implementing an endowments tax; and (3) that they should be exempted to preserve the relative pre-tax welfare of savers and spenders. When the three arguments are disentangled and the implications of each examined, it will be suggested that none presents a persuasive case for the greater fairness of a consumption tax.

All three versions of the argument against taxing the income from capital per se ultimately rest on the same claim: that an income tax is likely to disadvantage savers relative to consumers, as compared to the respective positions of such parties in a no-tax world. This claim is generally illustrated with some variant of the following example. Two taxpayers, Profligate and Thrifty, each earn $100 in wage income in a world without taxes. Profligate spends the entire $100 in the year it is earned. Thrifty sets it aside for consumption upon retirement fourteen years later. At 5 percent compound interest, Thrifty's initial $100 will double in value to approximately $200 at the end of that period.

Assume now the adoption of a 40 percent cash-flow consumption tax. Profligate earns $100 in year 1, and receives no deduction for savings. He thus pays a tax of 40 percent of $100, or $40, leaving him with $60 for consumption. Thrifty saves his entire earnings in year 1, and so pays no tax until year 14. In that year, Thrifty pays a tax of $80 (40 percent of the $200

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gesting that the "*power* of disposition (the availability of choice) is the essence of income"); RICH-ARD A. MUSGRAVE & PEGGY B. MUSGRAVE, PUBLIC FINANCE IN THEORY AND PRACTICE 227 (5th ed. 1989); H. SIMONS, *supra* note 1, at 96-97 (noting the variety of motives for savings beyond postponed consumption, and concluding that "there is something sadly inadequate about the idea of saving as postponed consumption"); C.W. Guillebaud, *Income Tax and the 'Double Taxation' of Saving,* 45 ECON. J. 484, 489-90 (1935); Alvin Warren, *Would a Consumption Tax Be Fairer Than an Income Tax?,* 89 YALE L.J. 1081, 1094-95 (1980).

   8. *See* RICHARD GOODE, THE INDIVIDUAL INCOME TAX 22 (1964); Richard Goode, *The Superiority of the Income Tax, in* WHAT SHOULD BE TAXED: INCOME OR EXPENDITURE?, *supra* note 3, at 43, 52-53. As Goode put it:

   Investment, no less than consumption, is a withdrawal from the common pool in the sense that it is an exercise of a claim on the use of resources. . . . Taxes are levied because it is necessary to compel people to relinquish their claims on resources and thus to allow the government to use them. Whether consumption claims or investment claims should give way is a question of policy.

R. GOODE, THE INDIVIDUAL INCOME TAX, *supra,* at 22.

he dissaves) and is left with $120 for consumption. Thus, Thrifty will again enjoy twice as much consumption as Profligate—that is to say, the ratio of the two taxpayers' funds available for consumption (1:2) remains unchanged under a consumption tax from the no-tax world. Moreover, Thrifty and Profligate will pay an identical tax in present value terms: Although Thrifty will pay a tax of $80 as compared to Profligate's tax of $40, Thrifty's tax is not due until the end of fourteen years, and the present value of that liability (at 5 percent interest) is only $40.

Under a 40 percent income or accretion-type tax, however, the tax liabilities of Profligate and Thrifty diverge. Profligate will still pay $40 in tax in year 1, leaving $60 for consumption. But Thrifty will pay a tax on wages in year 1 and also a tax on interest as it accrues in years 1 through 14, leaving only $91 for consumption in year 14.[9] Thus, rather than having twice as much ultimate consumption as Profligate as a result of saving, Thrifty ends up with only about 50 percent more. The present value of Thrifty's tax liability likewise increases relative to Profligate's as the amount Thrifty has available for consumption decreases.

For present purposes, the most important moral drawn from the above tale is that an income tax discriminates against savers by leaving them in a worse position relative to spenders than they would be in the no-tax world. The charge has been put two ways: that an income tax alters the relative present values of the explicit after-tax consumption streams of savers and spenders; and that it imposes different present value tax liabilities on saving and spending.[10] The two claims—which are merely two sides of the same coin[11]—are, in one form or another, at the root of most defenses of a consumption tax. Such claims have gained quite widespread acceptance, leading even strong proponents of an income tax to concede its unfairness, although concluding that the unfairness is outweighed by other considerations.[12]

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9. That is, the $60 after-tax wages set aside in year 1, compounding at a 3% after-tax interest rate. For a similar example illustrating the supposed discriminatory effect of an income tax, see Andrews, *supra* note 5, at 1121. The example is a simplified version of Irving Fisher's famous example of three brothers. *See* IRVING FISHER, THE INCOME CONCEPT IN THE LIGHT OF EXPERIENCE 12-13 (1906). A later, essentially unchanged version can be found in IRVING FISHER, THE NATURE OF CAPITAL AND INCOME 249-53 (1927).

10. For the former version, see ANTHONY B. ATKINSON & JOSEPH E. STIGLITZ, LECTURES ON PUBLIC ECONOMICS 71 (1980) (noting the widespread intuition that a consumption tax is horizontally equitable, because it affects "individuals with the same present value of receipts . . . identically, regardless of the timing of their wage income"); Andrews, *supra* note 5, at 1167. For the latter version, see DAVID F. BRADFORD, UNTANGLING THE INCOME TAX 162 (1986); *see also* JAMES E. MEADE, THE INTELLIGENT RADICAL'S GUIDE TO ECONOMIC POLICY 93-94 (1975).

11. That is, a saver is relatively worse off than a spender in an income-tax world by the present value amount of his greater tax liability. For a presentation of both sides of the coin, see I. FISHER, THE NATURE OF CAPITAL AND INCOME, *supra* note 9, at 249-53; N. KALDOR, *supra* note 5, at 84-86.

12. *See, e.g.,* Alvin C. Warren Jr., *Fairness and a Consumption-Type or Cash Flow Personal Income Tax,* 88 HARV. L. REV. 931, 946 (1975) ("[T]he choice between the consumption and accretion models for the personal income tax, as a matter of fairness, comes down to a choice between mitigation of lifetime wealth disparities and preservation of the pretax relative price of present and future consumption as the more important equity goal."); *see also* Richard Abel Musgrave, *A Fur-*

As a factual matter, the charge may be correct (although, contrary to the general assumption, not necessarily so). Under one plausible set of assumptions, an income tax, unlike a consumption tax, will indeed alter the relative values of savings and consumption, disadvantaging savers as compared to at least some consumers.[13] It is easy enough to show that such distortion exists, or might exist; the problem lies in explaining why it is unfair.

It is inadequate simply to assert that an income tax is unfair because it places a heavier burden on those who choose to defer their consumption than on those who do not. That response—arguably all that some of its most enthusiastic proponents have alleged on behalf of the fairness of a consumption tax[14]—obviously depends on the assumption that equal spenders (and not equal earners or equal owners, for example) *ought* to bear equal tax burdens. It depends, in short, on the *prior choice* of consumption over accretion as a "fair" measure of taxable income, a choice made on other, still-to-be-explained, grounds.

A number of other claims have been offered that purport to explain that choice, rather than simply rest on it. As suggested above, the answers fall into three different groups. The first, originating with Nassau Senior's theory of "Abstinence" in the early nineteenth century, argues that savers and spenders ought to bear equivalent tax burdens because they have equivalent wealth ex post, once the costs of deferring consumption are properly accounted for.[15] The second, suggested at least in passing by David Bradford, argues that savers and spenders ought to bear equivalent tax burdens, whether or not they are in equivalent positions ex post, because they face equivalent choices ex ante.[16] The third, put forth by Andrews, Bradford, Fisher, and others, suggests that savers and spenders ought to bear equivalent tax burdens because they are entitled to preserve the relative ex post advantages, whether equivalent or not, that they enjoy in a no-tax world.[17] Despite their frequent conflation in the consumption tax debate, the three arguments have little in common. The first (focusing on ex post wealth) is an argument for a consumption tax as a perfected income tax— that is, one that, accounting properly for the costs for which interest com-

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ther Note on the Double Taxation of Savings, 29 AMER. ECON. REV. 549 (1939); Warren, *supra* note 7, at 1099-1100.

13. For further discussion of the conditions that must hold in order for savers to be relatively disadvantaged by an income tax, see Part IV *infra.*

14. *See, e.g.,* Andrews, *supra* note 5, at 1167 ("The most sophisticated argument in favor of a consumption-type tax is that the lesser burden of a deferred tax is more appropriate because it ultimately imposes a more uniform burden on consumption, whenever it may occur, than does an accretion-type tax."); *see also* BLUEPRINTS, *supra* note 5, at 42 (arguing that an income tax is unfair because it alters the present value of a tax on labor earnings, based on the timing of earning and consumption decisions, "discriminat[ing] against people who earn early in life or prefer to consume late in life"); Peter Mieszkowski, *The Choice of Tax Base: Consumption versus Income Taxation, in* FEDERAL TAX REFORM: MYTHS AND REALITIES 27, 29-33 (Michael J. Boskin ed., 1978); William D. Andrews, *Fairness and the Personal Income Tax: A Reply to Professor Warren,* 88 HARV. L. REV. 947, 949 (1975).

15. *See* Part II *infra.*

16. *See* Part III *infra.*

17. *See* Part IV *infra.*

pensates, would exclude interest from an income tax base on the ground that it does not represent an accretion to wealth at all. The second (focusing on ex ante choice) argues for a consumption tax as a form of endowments tax—that is, a tax levied on the ex ante expected value of a taxpayer's earning capacity, irrespective of the actual uses to which this capacity is put. Only the third is an argument for a consumption tax in its own right, rather than as a means of implementing another theoretical tax base, although precisely what theory of fairness underlies this last argument remains something of a mystery.

The balance of the article explores each of the three arguments in turn, concluding that all three offer surprisingly weak cases for a consumption tax on fairness grounds. The article proceeds in a somewhat different fashion with respect to the three arguments. In assessing the first two arguments (discussed in Parts II and III respectively), the article generally takes as given the fairness of income (in the first case) and endowments (in the second) as tax bases. It concludes, however, that if consumption tax proponents' ultimate objective is to implement either tax base, a consumption tax is a poor means to do it. In assessing the third argument (discussed in Part IV), the article considers directly the merits of the underlying claim that a fair tax base is one that preserves the relative positions of taxpayers in a no-tax world.[18] Preliminary to that inquiry, the article notes that, contrary to common wisdom, savers may in fact *not* be disadvantaged relative to spenders under an income tax. The answer depends on which groups of spenders and savers one compares, as well as what one deems to be the appropriate tax treatment of consumer interest on the borrowers' side. Assuming that savers *are* disadvantaged relative to spenders, the article then turns to the central question of why that result is unfair. Although commentators on both sides have presumed without discussion that such an outcome is in fact unfair, it is far from obvious what theory of distributive justice underlies that presumption. After laying out the possible alternative theories, the article concludes that, on reflection, few commentators on either side are likely to subscribe to any of them.

The critique offered here does not foreclose the possibility that the

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18. There are two reasons for addressing the merits of the theory of fairness underlying the third argument, but not those underlying the first and second. First, the first two arguments for a consumption tax can be disposed of on the narrow ground that a consumption tax fails to implement either a perfected accretion-type income tax or an endowments tax. Thus, one need not reach the more controversial question of whether either income or endowments is itself a fair measure of taxable income. The same cannot be said of the third argument. For at least some groups of savers and spenders, under one plausible set of assumptions about the effects of a tax on savings, a consumption tax is in fact the best means to preserve the relative pre-tax values of saving and consumption. *See* notes 117-123 *infra* and accompanying text. Thus, it is necessary to reach the ultimate question of why that result is thought to be fair.

Second, the theories of fairness underlying the choice of income or endowments as a tax base have been developed and critiqued—extensively, in the case of income—in the tax literature. Again, the same cannot be said of the fairness arguments for preserving the relative pre-tax positions of savers and spenders. As a result, it is impossible to assess the case for adopting a consumption tax on that ground without first exploring the normative theory of fairness that might underlie it.

greater fairness of the consumption tax could be defended on other grounds. Some possibilities are discussed briefly in the conclusion. It does, however, suggest that the fairness arguments for a consumption tax that have dominated the tax literature do not withstand scrutiny.

II. A CONSUMPTION TAX AS A PERFECTED INCOME TAX

The basic argument for a consumption tax as a perfected income tax is usually put along the following lines. Assume that two equal earners in a no-tax world, Saver and Spender, have $100 each of current income left over after paying for their basic subsistence needs. Each of them has two choices: either to spend the $100 this year on discretionary consumption, or to save it to finance consumption the following year, earning a 10 percent riskless rate of return on savings in the interim.[19] The two options can be thought of as an immediate choice between two commodities—"consumption today" and "consumption next year."[20] Like any other choice between competing commodities (between say, "food today" or "clothing today"), a well-designed tax system should assume that whichever choice is made at the margin, it will not alter the relative wealth of the choosers. When the income tax treats one of the benefits of "consumption next year"—an explicit interest payment of $10—as an accretion to Saver's wealth, while treating Spender (who has chosen "consumption now") as realizing no accretion to wealth, it overtaxes the former relative to the latter, thereby violating the fundamental principle of horizontal equity that identically situated taxpayers should be subject to an identical tax.[21] Hence, the argument goes, in order to be fair, the accretion-type income tax should impose equal tax burdens on Spender and Saver,

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19. For simplicity's sake the example assumes a two-period world in which taxpayers face only two choices: to consume in year 1 or year 2. Obviously, in the real world taxpayers have the option to shift consumption between a multitude of time periods extending over their lifespans (or, if one takes account of bequests to heirs, beyond that). Although taking account of those multiperiod choices would complicate the examples used throughout this article, doing so would not fundamentally alter the analysis.

20. For an explicit description of the choice between present and deferred consumption as a choice among alternative commodities (such as "food today" versus "food next year") that is based on personal tastes, see D. BRADFORD, *supra* note 10, at 163; *see also* Mieszkowski, *supra* note 14, at 33-34; JOSEPH E. STIGLITZ, ECONOMICS OF THE PUBLIC SECTOR 441 (2d ed. 1988); WILLIAM VICKREY, AGENDA FOR PROGRESSIVE TAXATION 336 (1947). For a critique of this description as ignoring significant differences between intertemporal consumption choices and the choice among different commodities for current consumption, see Stephen A. Marglin, *What Do Bosses Do?: Part II*, 7 REV. RADICAL POL. ECON. 20, 35-36 (1975).

21. The argument assumes that a "fair" income tax is one that would be neutral as between all forms of accretions to wealth, taxing all equally. Needless to say, our current income tax base falls short of the goal in numerous respects, many of them far less debatable than the one considered here. Moreover, in many people's minds the goal of neutrality is neither desirable nor achievable. For an early, formative attack on a so-called "comprehensive tax base," see Boris I. Bittker, *A 'Comprehensive Tax Base' as a Goal of Income Tax Reform*, 80 HARV. L. REV. 925 (1967). For related attacks on the goal of "horizontal equity," see note 133 *infra* and accompanying text. However, to make the "perfected income tax" argument of any interest, one need not accept the premise that the ultimate goal of our tax system should be neutrality. There may be some value to understanding what constitutes a real accretion to wealth, if only as a means of recognizing when the tax system is creating subsidies or incentives for one set of choices over another (here, for spending over saving, by overestimating savers' accretions to wealth).

because even though Saver earns interest while Spender earns nothing, the two taxpayers are actually in equivalent positions ex post.

Over the years, two explanations have been suggested for the ex post equivalence between Spender's bundle of goods (present consumption of $100) and Saver's bundle of goods (future consumption of $110). The first, originating with Nassau Senior's "Abstinence" theory of interest,[22] implicitly assumes that the $110 of goods consumed by Saver next year will generate more utility than the $100 of goods consumed by Spender today, but argues that Saver's additional utility is offset by an equal psychic cost incurred by having to wait for the future consumption. Thus, the bundle of goods that Saver receives in year 2 is $110 worth of consumption, minus the $10 in psychic pain, yielding $100 in total utility.

A second, more peculiar, explanation for the equivalence ignores the possibility of psychic costs from the act of deferral, but argues that the utility of constant-dollar consumption declines over a taxpayer's life by precisely the amount of the discount rate. Thus, assuming a 10 percent discount rate, $110 of consumption by Saver in year 2 will generate the same utility in year 2 as $100 of consumption would have generated in year 1.

In either case, the argument amounts to the claim that the $10 interest payment merely leaves Saver in year 2 in the identical position as Spender was in year 1—with a bundle of goods worth (in future value terms) only $100, the value of Spender's present consumption. In the first case, Saver's "bundle" is made up of $110 in utility from $110 of explicit consumption in year 2, and $10 in disutility from the pain of abstinence in year 1. In the second case, it is made up of $100 worth of utility from $110 of explicit consumption in year 2. To put the argument another way, in the first case it is assumed that hidden psychic costs offset the extra benefits of increased consumption to Saver; in the second, it is assumed that there are no extra benefits to begin with.[23]

Thus, a perfected income tax ought to impose the same tax burden on spenders and savers, so that a taxpayer's ex post accretion to wealth will be equal at the margin, whichever consumption choice she makes. Equality can be achieved either by taxing *both* savings and consumption (that is, taxing Saver on the $10 explicit interest payment and Spender on the psychic income from current consumption, in an amount equal to the interest forgone) or by taxing *neither*. The two methods amount to the same thing, since a tax on both savings and consumption would, in effect, impose a flat rate surtax

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22. NASSAU WILLIAM SENIOR, OUTLINE OF POLITICAL ECONOMY 58 (George Allen & Unwin Ltd., 6th ed. 1938) (1836).

23. It should be noted that while both arguments generally assume that the sole benefit derived from wealth is the explicit consumption stream it finances, neither argument depends on that assumption. Even if a would-be saver values wealth only for the security, influence, prestige, and power that its mere possession brings, she will still opt to save only if the aggregate benefits of saving (including the psychic benefits of possessing greater wealth) outweigh the pain of deferring consumption or the loss due to the declining utility of deferred consumption. In this respect, neither argument is susceptible to the attack made against the Hobbesian foundational argument for resting on an impoverished notion of personal wealth. *See* notes 6-7 *supra* and accompanying text.

on wage income, the same result that would be obtained by taxing neither and raising nominal tax rates on wages. But by opting instead to tax only savings and not current consumption, the current income tax system over-taxes Saver relative to Spender.

As a preliminary matter, it is important to note the relatively limited scope of the claim made for a consumption tax under these two versions of the perfected income tax argument. The argument by its terms deals only with that portion of the actual return to the marginal saver[24] that she demanded ex ante as the price of deferral—that is, the real return on riskless investments. It ignores the portions of the return to the marginal saver that represent compensation for inflation, or reflect positive and negative returns to risk. It ignores as well the surplus (over individual reservation price) paid to the inframarginal saver. The significance of those omissions will be considered in more detail in Section E below, after the traditional arguments for exempting the pure interest component of investment return are dealt with on their own terms.

A. *The Problem of Unstable Preferences*

Both versions of the perfected income tax argument assume that the interest payment demanded ex ante (equal to the anticipated disutility of deferral) merely compensates the marginal saver for the actual, ex post disutility of deferral. It should be emphasized that both versions of the perfected income tax argument—unlike the endowments tax argument discussed in Part III below—adopt an ex post and not an ex ante measure of wealth. Saver is assumed to have a right *not* to the expected return itself, but rather to compensation for her ex post costs. Because of the difficulty of measuring those costs directly, however, we instead measure them indirectly by the price demanded ex ante for bearing them (that is, the expected return on the investment).

Translating the ex ante reservation price demanded for deferral into a measure of the ex post cost of deferral entails a number of conceptual difficulties. Chief among them is that for the identity between price and cost to hold, time preferences, whatever their source, must remain stable over the deferral period. If Saver and Spender systematically overestimate the ex

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24. For a given rate of return, a marginal saver is one who will save instead of spend only if the rate of return falls no lower than it is at present. In comparison, an inframarginal saver would willingly save instead of spend at a rate of return lower than the present one. The amount by which the actual interest rate exceeds the minimum return an inframarginal saver would demand in order to save is referred to as "inframarginal surplus."

For ease of exposition, the discussion here and in Part IV focuses on marginal and inframarginal *savers* rather than on marginal or inframarginal units of *savings.* Under a conventional marginalist analysis of savings behavior, however, every saver is by definition a marginal saver with respect to the last dollar she opts to save under prevailing interest rates. Furthermore, virtually all savers will be inframarginal with respect to a substantial portion of other dollars saved (that is to say, they would have opted to save at least some portion of dollars actually saved even under lower interest rates). The analysis throughout the article can accommodate this correction simply by substituting "marginal dollars saved" for "marginal savers" and "inframarginal dollars saved" for "inframarginal savers."

post disutility of deferred consumption (relative to current consumption) in making their savings decisions, the interest payment demanded by Saver will in fact leave her better off ex post than Spender.[25] Although economists have long assumed that such irrationality accounts for some portion of the preference for present over future consumption,[26] its prevalence is a matter of some dispute.[27] To the extent irrationality does exist, however, it clearly undercuts the "perfected income tax" argument for exempting interest on fairness grounds (although it may well strengthen the case for preferential treatment on purely paternalistic grounds). I would like to set the problem of irrationality aside, however, and assume that savers do incur some form of disutility from their choice to defer consumption that is not matched by any (unanticipated) disutility to spenders. The question is, what significance should that fact have in constructing a perfected income tax base?

B. *Interest as Payment for Abstinence*

The essence of the "cost of abstinence" argument is that interest merely compensates the marginal saver for the psychological discomfort of forgoing current consumption (measured by the discount rate demanded ex ante for enduring it). The argument, first put by Nassau Senior in the 1830s, was widely adopted throughout the late nineteenth and early twentieth centuries.

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25. In the case of abstinence theory, for example, as Professor Kelman has suggested, the pain of abstinence for savers may be counterbalanced by an unanticipated ex post cost to spenders, in the form of regret for past consumption decisions that failed to take adequate account of future needs. If so, the saver with greater explicit wealth will in fact be better off ex post than the spender, "even though saving did not appear ex ante to be a better choice because of the ex ante self's disregard of the ex post self's potential cost of regret." Mark Kelman, *Time Preference and Tax Equity,* 35 STAN. L. REV. 649, 660 (1983). If time preference is instead hypothesized to arise from the declining utility of consumption over time, irrationality could result from spenders' systematically underestimating the utility their future selves will derive from consumption. *See* text accompanying notes 49-50 *infra.* Similarly, for the suggestion that the instability in preferences in intertemporal choices is one of the chief factors that defeats the analogy between savings decisions and other decisions involving a choice between two commodities, see Marglin, *supra* note 20, at 35-36.

26. *See* EUGEN V. BÖHM-BAWERK, THE POSITIVE THEORY OF CAPITAL 253-59 (William Smart trans., London, Macmillan & Co. 1891) (1889); *see also* IRVING FISHER, THE THEORY OF INTEREST 81-83 (1930) (attributing such a preference in part to the absence of foresight and in part to a lack of self-control (a related irrationality)); JOHN RAE, THE SOCIOLOGICAL THEORY OF CAPITAL 54 (Charles Whitney Mixter ed., 1905).

27. *See* Joseph Bankman, *Tax Policy and Retirement Income: Are Pension Plan Anti-Discrimination Provisions Desirable?,* 55 U. CHI. L. REV. 790, 816-21 (1988); Deborah M. Weiss, *Paternalistic Pension Policy: Psychological Evidence and Economic Theory,* 58 U. CHI. L. REV. 1275, 1300-11 (1991). It is difficult if not impossible to measure irrationality in time preference directly. Some have inferred that such irrationality is widespread, from the finding that a significant portion of the population saves amounts inadequate to fund post-retirement consumption at the level of average lifetime consumption. *See* Alan S. Blinder, Roger H. Gordon & Donald E. Wise, *Social Security, Bequests and the Life Cycle Theory of Saving: Cross Sectional Tests, in* THE DETERMINANTS OF NATIONAL SAVING AND WEALTH 89 (Franco Modigliani & Richard Hemming eds., 1983); Laurence J. Kotlikoff, Avia Spivak & Lawrence Summers, *The Adequacy of Savings,* 72 AM. ECON. REV. 1056, 1067 (1982) (concluding that for the poorly educated, post-retirement consumption is significantly below average lifetime consumption). However, that finding itself has been contested, and even if accurate, does not necessarily support an inference of irrationality. Others have inferred irrationality from radical changes in prospective discount rates over different time horizons that seem difficult to attribute to anything but irrationality in the initial time preference. *See* Weiss, *supra,* at 1300-03.

In recent debates, it has been embraced explicitly relatively infrequently.[28]

The argument raises two serious problems. First, taking account of the discomfort of deferral requires us in effect to give savers a basis in their psychic disutility—or, more precisely, a basis in the psychic pleasure they could derive from current consumption, which creates an entitlement to the marginal payment they demand to forgo it. Such a step represents a radical departure from customary tax policy, a point highlighted by comparing the proposed solicitude for savers' psychic discomforts with our customary treatment of workers. The marginal worker is, by definition, indifferent ex ante between working at the market wage and not working. That is to say, the equilibrium wage rate (reflecting the marginal supply price of labor) exactly compensates for the disutility of forgoing leisure. But if the marginal worker chooses to work, she will be taxed in full on her explicit wages, without any offset for the psychic disutility of work.[29] The anomaly of giving savers a basis in the disutility of forgone consumption when we refuse to give workers a basis in the disutility of forgone leisure is exacerbated when one recognizes that a consumption tax will shift the current income tax burden

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28. John Stuart Mill provided influential, early support for Senior's abstinence theory. 1 JOHN STUART MILL, PRINCIPLES OF POLITICAL ECONOMY 278-79, 495-500, 568 (New York, D. Appleton & Co., 5th ed. 1896). Most political economists through the mid-1920s, progressives and conservatives alike, followed suit, conceding that the pain of abstinence created a moral entitlement to whatever minimal payment was demanded in return for bearing it. There were however a few strong dissenting voices on the left, including the early Socialists, the Fabian Socialists, and a few progressives like Edwin Cannan and Herbert Davenport. *See* EDWIN CANNAN, HISTORY OF THEORIES OF PRODUCTION AND DISTRIBUTION 197, 213-14 (2d ed. 1903); HERBERT JOSEPH DAVENPORT, ECONOMICS OF ENTERPRISE 363 (1913); HERBERT JOSEPH DAVENPORT, VALUE AND DISTRIBUTION 45 (1908). For an overview of the late nineteenth and early twentieth century debate surrounding Seniorian abstinence theory, see Barbara H. Fried, Robert Hale and Progressive Legal Economics ch. 4, at 18-22, 51-55 (Mar. 1992) (unpublished manuscript, on file with the *Stanford Law Review*).

For recent discussions of abstinence theory, see Kelman, *supra* note 25, at 658-60; Warren, *supra* note 7, at 1107 (noting the argument but dismissing it on the ground that it requires one to account for psychic benefits and detriments).

29. *See* H. GROVES, *supra* note 7, at 109 (discussing the inconsistency of allowing for the psychic costs of saving while ignoring (inter alia) the psychic cost of labor); Alan Gunn, *The Case for An Income Tax,* 46 U. CHI. L. REV. 370, 378 (1979); Joseph Bankman & Thomas Griffith, *Is the Debate Between an Income Tax and a Consumption Tax a Debate about Risk?,* 47 TAX L. REV. (forthcoming 1992-1993) (manuscript at 7, on file with the *Stanford Law Review*); *see also* JOSIAH STAMP, THE FUNDAMENTAL PRINCIPLES OF TAXATION 58 (1921) (arguing that while interest may be compensation for "abstinence," there is no reason why interest income earned in that form should not be taxed like any other income). For an acknowledgment by proponents of a consumption tax that both an income and a consumption tax are biased in favor of leisure over work, see N. KALDOR, *supra* note 5, at 130-40; Andrews, *supra* note 5, at 1169.

It has been suggested that labor is in fact taxed on a consumption tax model, due to our failure to tax human capital (in the form of wage-earning capacity) as it is accumulated, deferring taxation until such capacity is exercised by generating an explicit wage stream. In other words, labor is taxed on a cash-flow version of a consumption tax. *See* William A. Klein, *Timing in Personal Taxation,* 6 J. LEGAL STUD. 461, 470-73 (1977). For reasons that are too lengthy to explore here, I believe that it is inaccurate to characterize the current treatment of human capital as adhering to any simple consumption tax model, and that it is far from clear that financial capital *is* disadvantaged relative to human capital. If one concluded otherwise, however, it would obviously undercut the suggestion that extending consumption tax treatment to financial capital alone under a "perfected income tax" argument would put such capital on preferential footing as compared to human capital, as the argument here in effect asserts that human capital already enjoys that advantage, albeit through a cash-flow rather than yield-exempt version of a consumption tax.

entirely onto labor. At least in the short run, the effect will be to increase the relative tax burden of labor as compared to leisure.[30] Thus, to have any credibility at all, the "cost of abstinence" justification for a consumption tax would have to take account of the *relative* inequities caused by ignoring the psychic disutility of abstinence and labor.

Second, it is unclear what the supposed nature of the disutility is, and what moral significance is being claimed for it. Senior's original abstinence thesis was developed against a backdrop of rising socialist attacks on interest as an unearned surplus stolen by capital from labor's rightful product. Its relationship to those attacks is unmistakable.[31] The availability of capital in the productive process, argued Senior, depended on the willingness of capitalists to abstain from current consumption of their wealth. Thus, abstinence, like labor and nature, was a distinct factor of production, which—like labor—exacted from its agents an absolute sacrifice: "To abstain from the enjoyment which is within our power, or to seek distant rather than immediate results, are [sic] among the most painful exertions of the human will."[32] It followed that the remuneration demanded and paid for that exertion was no less deserved than the wages paid to workers for the disutility of labor. In Senior's famous phrase, "Abstinence . . . stands in the same relation to Profit

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30. This need not be the case. The revenue shortfall could instead be made up by a lump-sum tax. Moreover, in the medium or long run, if the elasticity of the savings rate relative to the after-tax rate of return is high enough, it is conceivable that the resulting increase in savings rates under a consumption tax could trigger sufficiently rapid economic growth to avoid any revenue shortfall, and indeed even permit a *lower* rate structure on wages. For such a suggestion, see DAN FULLERTON, JOHN B. SHOVEN & JOHN WHALLEY, REPLACING THE U.S. INCOME TAX WITH A PROGRESSIVE CONSUMPTION TAX: A SEQUENCED GENERAL EQUILIBRIUM APPROACH 24-25 (National Bureau of Economic Research Working Paper No. 892, 1982) (demonstrating that with savings elasticity of 2.0 the wage tax rates could be lowered within a short period of time); Summers, *supra* note 3, at 541-42; *see also* Boskin, *supra* note 4, at 57 (arguing for a savings elasticity of 2.0). While many economists believe that the higher savings rate under a consumption tax will in the long run permit a lower wage rate, they also believe that the long run will be sufficiently long that on a present value basis the benefits will be outweighed by transition costs. *See, e.g.,* ALAN J. AUERBACH & LAURENCE J. KOTLIKOFF, DYNAMIC FISCAL POLICY 127-34 (1987). Even disregarding the possible gains from a higher savings rate, if (as most economists believe) the labor supply is less sensitive to tax rates than is savings, a shift to a pure wage tax might well reduce efficiency losses by minimizing tax-induced distortions in aggregate consumer preferences. If one takes the supply price of labor (deduced from its elasticity) as measuring the psychic disutility of labor that *ought* to be counted as a cost in a perfected income tax—a move that entails some of the same difficulties suggested below with respect to savings—then a shift to a pure wage tax may also reduce the inequities of our current imperfect income tax, by shifting the tax burden onto the sector with lower unaccounted-for costs. But all of this seems strained at best, and takes us far beyond any analysis consumption tax advocates have offered.

31. For a survey of early socialist exploitation theories emerging contemporaneously with the development and popularization of Senior's thesis, and a discussion of the connection between the two, see EUGEN V. BÖHM-BAWERK, CAPITAL AND INTEREST: A CRITICAL HISTORY OF ECONOMICAL THEORY [sic] 286, 315-27 (William Smart trans., 1890; Augustus M. Kelly 1970) (1884); *see also* H.J. DAVENPORT, ECONOMICS OF ENTERPRISE, *supra* note 28, at 370-76; Walton H. Hamilton, *Property—According to Locke,* 41 YALE L.J. 864, 870 (1932) (discussing abstinence theory as a self-conscious extension of the labor theory of value).

32. N.W. SENIOR, *supra* note 22, at 59. As Herbert Davenport noted, to the same argumentative end Courcelle-Seneuil used the term *travail de l'épargne* (the labor of saving) to describe the act of saving. H.J. DAVENPORT, VALUE AND DISTRIBUTION, *supra* note 28, at 46 n.4.

as Labour does to Wages."[33]

The spectre of all savers—the Rothschilds of the world included—suffering under the enormous weight of self-denial provoked (not surprisingly) a contemptuous response from the socialist camp. Lassalle's diatribe against Senior is probably the most famous example:

> The profit of capital is the 'wage of abstinence.' Happy, even priceless expression! The ascetic millionaires of Europe! Like Indian penitents or pillar saints they stand: on one leg, each on his column, with straining arm and pendulous body and pallid looks, holding a plate towards the people to collect the wages of their Abstinence. In their midst, towering up above all his fellows, as head penitent and ascetic, the Baron Rothschild! This is the condition of society! How could I ever so much misunderstand it![34]

It is conceivable that attacks like Lassalle's were meant to suggest (albeit in inchoate premarginalist form) the possibility that a significant amount of savings particularly among the wealthy was inframarginal. The implications of that possibility are explored below. But the skepticism it reflects about the sacrifice entailed in deferring consumption can be applied to marginal savers as well. The price demanded at the margin for forgoing current consumption reflects the relative preferences attached to current and future consumption given present and expected future wealth. This price says nothing about the absolute hedonic content of either choice. Herbert Davenport, one of the few progressive economists to embrace the early socialists' skepticism and translate it into marginalist terms, argued that that fact robbed abstinence theory of any ethical significance in justifying a "right" to interest. To the extent that the pain of abstinence is taken merely to denote the fact that interest must embody attractions sufficient at the margin to displace the attractions of present consumption, Davenport noted, the existence of such "pain" is axiomatic. In that limited sense of an opportunity cost, equal to the margin of displacement between present and future uses of wealth, abstinence reflects a cost as much for Mr. Rockefeller as for a pauper.[35] But the existence of such a margin of displacement says nothing about the measure of pain undergone or the resistance overcome:

> The marginal postponement of consumption, like any other case of margins, is a ratio relation; any particular item of saving is marginal, not because of the high significance of the abstinence protest, but merely because the forces making for present consumption, representative, it may be, of very great or of very limited present need, are at an approximate equilibrium against the estimates of the advantages promised by postponement.[36]

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33. N.W. SENIOR, *supra* note 22, at 58-59.

34. FERDINAND LASSALLE, KAPITAL UND ARBEIT 110 (Berlin 1864), *quoted in* E. V. BÖHM-BAWERK, *supra* note 31, at 276.

35. H.J. DAVENPORT, THE ECONOMICS OF ENTERPRISE, *supra* note 28, at 361-66.

36. H.J. DAVENPORT, VALUE AND DISTRIBUTION, *supra* note 28, at 259-60. Fisher's "impatience" theory, explaining the positive supply price for savings, is indistinguishable from Davenport's theory of marginal displacement. Both are merely labels for the relative preference for present over future consumption. Fisher, like Davenport, rejected the notion that one can deduce from opportunity costs the existence of a real cost analogous to labor. Thus, Fisher expressly repudiates the Seniorian argument that "abstinence or waiting exists as an independent item in the cost of produc-

Two points embedded in Davenport's critique are worth some thought in assessing the validity of the abstinence claim. The first is that there is no ground for assuming that the pain incurred by savers is homogeneous, and hence that the interest payments that savers demand for saving are proportionate to the pain that saving entails for them.[37] Taxpayer A, eking out a subsistence income now but fearing even greater impoverishment in future years, is willing to set aside $100 of current income for as little as 1 percent interest. Taxpayer B, well off now but expecting even greater wealth in the future, will not set aside $100 for less than 10 percent interest. Everything (besides wealth) being equal, the most plausible explanation for this disparity in reservation prices is surely not that A suffers a pain of deferral significantly less in absolute terms than B, but that he values a marginal dollar of future consumption significantly more. That is, for A the expected disutility of future want (or to put it another way, the high utility of money in warding off future want) will dominate the reservation price; for B, for whom the marginal utility of an additional dollar in the future is very low, the disutility of forgoing present consumption will dominate the reservation price.

If the sole aim were either to maximize efficiency in the choice between savings and consumption or to create incentives to save, then in both cases, given the existing distribution of wealth, the reason for the disparity in reservation prices would be irrelevant. But from the perspective of fairness, the disparity seems at first blush troubling, as it suggests that by comparing only A and B's respective reservation prices, we understate A's sacrifice relative to B's. Davenport, not surprisingly, concluded that focusing on reservation prices would therefore systematically discount the sacrifice of the poor.[38] One need not embrace that conclusion or its implicit assumptions both as to the declining marginal utility of money and the interpersonal comparability of utility to accept Davenport's essential point. If abstinence justifies interest only to the extent it entails real pain—the "grief and groan of saving," in Davenport's words[39]—one cannot deduce the extent of that pain from the price demanded for bearing it.

The same objection, however, could be raised with respect to any purchase, where consumers are given a basis in goods equal to their nominal cost, irrespective of the (differing) subjective utility of the relinquished purchase price in their hands. For instance, A scrapes together $1000 out of her meager earnings to buy a beat-up jalopy to enable her to get to and from work. B, fabulously wealthy and the owner of six other cars, on a whim purchases an identical jalopy for $1000, for occasional use at his country

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tion," concluding that one who lives off income from capital is "a 'rentier.' " I. FISHER, *supra* note 26, at 486-87; *see also* I. FISHER, THE NATURE OF CAPITAL AND INCOME *supra* note 9, at 171-72.

37. H.J. DAVENPORT, VALUE AND DISTRIBUTION, *supra* note 28, at 45.

38. "To the rich marginal purchaser, the utility obtained and the utility foregone are of approximately equal, but of slight, subjective value; to the poor purchaser the same equality between obtaining and foregoing holds, but the terms in the equality ratio are of very considerable subjective value." H.J. Davenport, *Doctrinal Tendencies—Fetter, Flux, Seager, Carver,* 14 YALE L. REV. 300, 316 (1905).

39. H.J. DAVENPORT, VALUE AND DISTRIBUTION, *supra* note 28, at 49.

house. Most people (despite the official skepticism among economists about interpersonal utility comparisons) would assume that relinquishing the $1000 was relatively more painful for *A* than for *B*. Notwithstanding that fact, *A* and *B* are both treated as having an equal basis in their cars, equal to the nominal price paid. The answer to a charge of unfairness seems to be that if the money sacrificed has greater utility in *A*'s hands, so also does the jalopy gotten in return. The same answer seems dispositive with regard to savers *A* and *B*, *assuming* we are willing to give savers a basis in their psychic disutility to begin with. In other words, if $100 of present consumption has a greater value to *A* than *B*, then the minimum compensation *A* will demand for deferring it for one year ($1, compared to $10 for *B*) must have a greater absolute subjective value as well.

Second, Davenport argued, there is no reason to assume that abstinence inflicts pain at all, in any normal hedonic calculus. The choice between present and future consumption may be merely a choice between "positive gratifications."[40] If so, "it would be a waste of sympathy to grieve with one who has to choose between two pleasures, and to call either pleasure a pain because it is conditioned on going without the other pleasure."[41] Moreover, if there is any pain involved in saving, Davenport argued, it lies in the fact that a present pressing want remains unappeased, *not* in the fact that a saver possesses income he could have used to alleviate it had he not concluded that his future wants were even more pressing.[42]

It is conceivable that Davenport was wrong here—that the existence of a

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40. *Id.* at 46-47.
41. *Id.* at 47.
42.

> [W]here the individual is in possession of sufficient money to buy him a meal, but decides to save his money and to lend it, . . . the *abstinence* [is not] a pain. It is only the *hunger* that is pain. A man having the hunger but no money has unquestionably one pain and no more, that of hunger. So much is clear. If now we take this man to have both the hunger and the money, he has not now two pains, one of hunger and one of abstinence, but only the one original pain of hunger. His is, indeed, the fortunate case of one who need have no pain at all if only he would let go of his money. Perhaps to lose his money would be painful, but only in the sense that it would involve the continuance of the pain of hunger. But to lend the money is not a pain, and the only pain in the case is that gnawing at his vitals that he has declined to still. . . . Were this not the truth, the case of one having both the hunger and the money would be the especially grievous case; . . . the rich who could spend, but do not, would be the unfortunates of the world . . . .
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> . . . There is nothing especially touching, then, in the fact that [a man] has the dollar, and that, in spending it now or later, he has to forego an alternative spending. It appears, then, that not only the necessity of a choice between pleasures is not a pain, but also, and with equal certainty, that the necessity of a choice between pains is not a pain.

H.J. DAVENPORT, ECONOMICS OF ENTERPRISE, *supra* note 28, at 361-62. For a similar critique of "abstinence" as not reflecting a real cost, see I. FISHER, *supra* note 26, at 486-87, 539. Davenport is ambiguous as to whether abstinence differs from labor in this respect, but one can make the case that it does. Labor, it is true, could be described as the choice to forgo leisure for money, just as abstinence is the choice to forgo present consumption for future consumption. But unlike abstinence, labor clearly involves an affirmative act that for many people imposes a disutility of its own beyond the absence of leisure. Fisher, for one, unambiguously embraced the view that labor (at least when "disagreeable") reflects the only true cost in production, although he distanced himself on other grounds from the socialist conclusion that interest was therefore morally unjustifiable. *See id.* at 20, 22-24, 540; I. FISHER, THE NATURE OF CAPITAL AND INCOME, *supra* note 9, at 171-75.

choice (forgone) to alleviate want could itself inflict a psychological pain that would not exist in the absence of any choice at all. Indeed, Senior's own description of the "pain" of abstinence as lying in burdensome exertions of the will is not inconsistent with that characterization.[43] But that rejoinder seems strained at best. A more promising response for consumption tax advocates would be to concede that Davenport was right as a descriptive matter that the "pain" of abstinence may amount to no more than an opportunity cost, but to argue that this cost is sufficient to create an entitlement to interest. *A* and *B*'s ownership of their respective $100 gives them the right to consume their money currently, retaining the full value of whatever pleasure that afforded them, and hence, the lesser-included right to whatever price they demand for forgoing that opportunity in favor of another, less attractive one. That response, however, gives up any distinct claim on behalf of abstinence theory in favor of the broader claim that any right (here, the right to consume one's own wealth currently) necessarily carries with it a subsidiary right to one's reservation price for relinquishing it, *whatever the reason for demanding that price.* This claim—in effect equating efficiency with equity concerns—subsumes the abstinence argument, along with any other explanation for a positive supply price for interest, for the claim remains true irrespective of the ground for preferring present to future consumption. That economy of explanation, however, is achieved at the cost of whatever moral weight the Seniorian rhetoric of sacrifice lends the cause.[44]

C. *Lower Value of Deferred Consumption*

Alternatively, it has been argued that interest should be exempted under a perfected income tax because it exactly compensates for the fact that the utility of constant-dollar consumption declines over a taxpayer's lifetime. Thus, where the abstinence argument assumes that savers are paid more to compensate for the pain of deferring consumption, this argument assumes that the commodity they receive—consumption in the future rather than today—is worth less, by the amount of the discount rate. The argument closely parallels the argument for indexing inflation gains under an income tax; nominal increases in wealth over time overstate real wealth, not (as with inflation) because it takes more dollars to buy the same goods but because the subjective value of the purchased goods declines.

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43. "To abstain from the enjoyment which is in our power, or to seek distant rather than immediate results, are [sic] among the most painful exertions of the human will." N.W. SENIOR, *supra* note 22, at 60.

44. In addition, the response is not self-evident. There are many situations in which a right to *X* does not carry with it a right to retain the full reservation price demanded for relinquishing *X*. Again, leisure is one notable example, and any satisfactory defense of exempting interest would have to take account of the anomaly of simultaneously taxing the marginal wages of forgone leisure. The argument that the right to present consumption *should* carry with it the right to the payment exacted for forgoing it is weakened considerably if the reason we fail to tax consumption is because it is administratively difficult to tax consumer surplus in nontangible forms, rather than because we believe that spenders have an entitlement to that surplus.

The argument has never been put forth explicitly in the pro-consumption tax literature, leaving some reason to doubt how seriously any advocate would take it. But since a number of critics have suggested that it underlies at least some proponents' support of a consumption tax,[45] it is worth noting briefly the obvious difficulties it entails.

As Professor Warren notes, one cannot deduce the declining value of consumption merely from the existence of a positive time preference—that is, from the mere fact that people apparently prefer present to future consumption. The fact that we go through time only in one direction precludes us from separating the value of proximity from that of priority.[46] Fisher, perhaps inadvertently, highlighted the same problem when he defined time preference (or "impatience") as "the (percentage) excess of the present marginal want for one more unit of *present* goods over the *present* marginal want for one more unit of *future* goods," but then elided the two in concluding that "all time preference resolves itself in the end into the preference for comparatively early *income* over comparatively remote, or deferred, *income*."[47] As Warren's remarks suggest, the two concepts—remote and deferred income—are hardly the same thing.

One also cannot deduce the declining value of consumption by analogy to the time value of money itself. That value would exist due to the explicit productivity of capital, irrespective of the uses to which the income from capital is put.[48] But as Professor Warren notes, for an analogous argument to hold true with respect to consumption, the value of early consumption would have to compound into the future.[49] Not only does the value of consumption not compound over time; it is, by definition, exhausted at the time of consumption, except perhaps for pleasant memories, acquired wisdom, or other residual human capital we may carry with us into later life as a result of our consumption experiences.

Thus, one can justify discounting the utility of future consumption only by hypothesizing one of two things. Either (1) our pleasure at nominally equal amounts of consumption systematically declines as we age, at a rate exactly equal to the discount rate throughout our lifetimes, or (2) we sys-

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45. Henry Simons apparently understood Fisher's conclusion that equal present value consumption streams ought to bear equal present value taxes to rest, at least in part, on the assumption that the value of consumption declined over time. *See* H. SIMONS, *supra* note 1, at 90 (arguing that this assumption was based on a faulty analogy between values realized in consumption and yield to capital in the productivity sense); *see also* Stanley A. Koppelman, *Personal Deductions Under an Ideal Income Tax*, 43 TAX L. REV. 679, 701 (1988) (citing to Fisher and Andrews as arguing that "consumption has a time value—present consumption is more valuable than an equal nominal amount of future consumption"). While this understanding is a conceivable moral of Fisher's tale of the three brothers, it seems an unlikely one, and is not one Fisher himself ever offered directly. For other rejoinders to the argument, not targeting any particular proponents, see Gunn, *supra* note 29, at 374-78; Warren, *supra* note 7, at 1099-1101.
46. Warren, *supra* note 7, at 1100.
47. I. FISHER, *supra* note 26, at 62-63.
48. *See* H. SIMONS, *supra* note 1, at 90 ("What is discounted in the valuation of property is future yield . . . which may or may not be consumed. What are discounted are yields, not 'consumptions.' ").
49. *See* Warren, *supra* note 7, at 1100.

tematically prefer our younger selves to our older selves, and thereby weight the subjective utility derived from later consumption at a rate that declines apace with the discount rate for money. Just to state both hypotheses is, one suspects, to refute them in most people's minds. Assuming that the first hypothesis is false, the second hypothesis would require the belief that a 55 year-old, while deriving the same pleasure from equal amounts of consumption as she remembers deriving when she was age 8, would—*if she could go back in time*—nonetheless give preference to the pleasures of her 8 year-old self, to the extent of voluntarily transferring (at a 5 percent discount rate) $1000 of consumption today for $100 of consumption then. Why one should imagine such a heroic attachment to our younger selves—and imagine that the attachment to one's current self grows weaker for each year of passing youth by precisely the amount of the discount rate—is somewhat perplexing. As suggested above, if there is any stable time preference for consumption, it is most likely for proximity over priority. That is, our 8 year-old would enormously prefer $1000 of consumption at age 8 to $1000 of consumption at age 55; likewise, our 55 year-old (were she permitted to go back and correct history) would enormously prefer $1000 of consumption at age 55 to $1000 of consumption at age 8. This suggests that savers and consumers alike routinely underestimate the utility that future consumption will have to their future selves. In other words, they are *not* rational in predicting future utility. It is difficult to see what moral one should derive from that fact with regard to a fair tax on explicit consumption at either age, except perhaps that we should disregard such preferences entirely.

Finally, even if it is true that we consistently prefer earlier to later consumption, the implication that the tax system ought to take account of that fact is radical indeed. Like the abstinence argument, once it is reduced by Davenport's critique to a mere opportunity cost argument, it suggests that taxes should be levied not on the market value of income or consumption (the conventional view in both an accretion and consumption tax base), but rather on the subjective utility that income or consumption provides. The customary pragmatic objection to a tax based on subjective utility, that it is unmeasurable and hence unadministrable,[50] is somewhat alleviated here, as the argument assumes that the utility of money to each individual declines annually throughout her life by the discount rate in effect as she makes the annual decision not to dissave.[51] But other objections remain. The "declin-

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50. *See, e.g.,* N. KALDOR, *supra* note 5, at 51 (arguing that "tax systems are not, and never could be, so constructed as to take into account the peculiarities of individual temperaments").

51. The assumption that the utility of consumption declines with age implies that the disutility of the nominal *tax* levied on interest will also decline over the taxpayer's life by the amount of the discount rate. This fact does not, however, necessarily dispose of the "declining utility of consumption" argument against taxing interest. The claim is that there is no increment in real value to begin with on which to levy a tax (whether or not the tax becomes less painful over time). Note, however, that the assumption that tax payments will become less painful over time, as consumption becomes less pleasurable, does explain why—if one subscribes to the "declining utility of consumption" hypothesis—one would *not* have to index tax rates on *wages* to decline over a taxpayer's lifetime. Although an 8 year-old who earns and spends $1000 currently has had an accretion to wealth (measured by the utility of the consumption it commands) that is by hypothesis some 10 times greater

ing utility of consumption" hypothesis extends only to *intra* personal utility comparisons over a lifetime; it says nothing about the *inter* personal comparisons necessary to conclude that rates not only ought to decline at the same annual rate for all taxpayers over their lifetimes, but ought to start at the same absolute level as well. While the latter, unprovable assumption might be an acceptable (indeed, essential) premise underlying tax policy generally, it seems odd to indulge it here, while at the same time insisting that the tax system account punctiliously for intrapersonal changes in utility over time. More importantly, even if a utility-based system were administrable, it is doubtful we would choose to abandon the advantages that an objective, market-based measure of wealth provides. These include liquidity, as well as taxpayer support resting on a widely-shared perception that what ought to count in measuring ability to pay is explicit wealth or consumption, rather than the subjective pleasure either provides.[52]

D. *Other Hypotheses About Savings Behavior*

The "cost of abstinence" and "declining utility of consumption" arguments both assume that the equilibrium interest rate is set to compensate for the reduced value of future consumption to the marginal saver. Other explanations for savings behavior, however, have been offered. The one that has dominated economic literature for the past thirty years is the life cycle hypothesis, which postulates that an individual's savings rate is driven by the desire to spread consumption equally over her lifetime.[53] How well does the argument for exempting interest under a "perfected" income tax fare under the life cycle hypothesis?

At first cut, it may appear that if savings is solely a means to smooth out consumption streams, any interest received is pure surplus to the saver. Consider, for example, a saver, *Q*, in a two-period world with no time preference (that is, where a dollar of consumption today, all other things being

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than that which the same $1000 will yield her when she is 55 years old, the disutility of a 30% tax on that $1000 will also be 10 times greater when she is 8 than when she is 55. Thus, a uniform tax rate on wages across time will automatically impose an equal tax burden on taxpayers throughout their lifetime, even assuming that the value of wages declines. The difference between interest and wages in this respect follows simply from the fact that we give taxpayers no basis in their disutility, thus treating wages as an increment to wealth.

52. On the latter point, see Jeff Strnad, *Taxation of Income from Capital: A Theoretical Reappraisal,* 37 STAN. L. REV. 1023, 1094 n.159 (1985) ("People's concern may focus more on *what* other people have in the way of available consumption or available power to consume than on how deeply people enjoy that consumption."); Warren, *supra* note 7, at 1096-97 (arguing that ignoring utility is preferable on both philosophical and practical grounds).

53. For early presentations, see MILTON FRIEDMAN, A THEORY OF THE CONSUMPTION FUNCTION (1957); Alberto Ando & Franco Modigliani, *The "Life Cycle" Hypothesis of Saving: Aggregate Implications and Tests,* 53 AM. ECON. REV. 55 (1963). A number of earlier accounts relied implicitly on a life cycle model in describing the likely direction of time preference. *See, e.g.,* E. V. BÖHM-BAWERK, *supra* note 26, at 249-52; I. FISHER, *supra* note 26, at 66-67, 73-75, 383-84 (referring to the "time shape" of income). For more recent developments of the hypothesis, see A. ATKINSON & J. STIGLITZ, *supra* note 10, at 73-77; Summers, *supra* note 3. For a summary of recent critiques of the life cycle hypothesis as unsupported by empirical data on savings behavior, see Laurence J. Kotlikoff, *Intergenerational Transfers and Savings,* J. ECON. PERSP., Spring 1988, at 41.

equal, is worth the same thing as a dollar of consumption in the next period), with a concave utility function (such that aggregate lifetime utility will be maximized if consumption in each time period is equalized), and with an expected earnings pattern of $50,000 in period 1 and $10,000 in period 2. At a zero interest rate, Q will save $20,000 in period 1, so as to equalize consumption in both periods at $30,000. Given the existence of a positive interest rate, r, Q will save slightly less, to reflect the increase in consumption in period 2 resulting from the interest paid on any amount saved.[54] But given that Q would have saved a greater amount at a zero interest rate, whatever interest is paid appears to be pure surplus.[55]

The above analysis, however, focuses solely on the income effect of positive interest payments, ignoring any possible offsetting substitution effect. At a high enough interest rate, the substitution effect will dominate the income effect—that is to say, the utility gain to Q from increasing nominal consumption in period 2 by the amount of interest earned will outweigh the utility loss from an unequal consumption stream. At that point, Q will save *more*, not *less*, as interest rates increase. For the incremental dollars saved, interest will not be pure surplus to Q. Instead, it represents compensation for the utility loss from enduring a more unequal consumption stream. In short, in the first case posed above, Q is a rentier, but only because he is inframarginal with respect to life cycle savings decisions. When he becomes marginal, interest represents the minimum payment demanded for deferring consumption.

The point may be made clearer by focusing on a saver with *lower* earnings in period 1 than period 2. Consider, for example, taxpayer X, who earns $10,000 in period 1 and $50,000 in period 2. One would normally expect X not to be a saver. In a no-interest world, X would borrow $20,000 in period 1, and in a world with interest rate r, X would borrow slightly less, to reflect the fact that her consumption in period 2 will be reduced by the $20,000 repayment of principal *plus* interest accruing on the $20,000. But at a sufficiently high interest rate, X will stop borrowing and become a saver. For X turned saver, like Q turned greater saver, interest is *not* pure surplus; it represents compensation for the utility loss from enduring an even more unequal consumption stream.

Once again, the question is what significance this observation should have in determining the fair treatment of Q or X under an income tax. In a sense, the problem posed is merely a variant of the "declining utility of deferred consumption" argument above. In both cases, interest compensates for the decreasing utility of explicit consumption over time. Here, the decrease results from greater inequality in intertemporal consumption, rather than from the lower value of future consumption per se. Despite this difference, however, the same responses apply. The measurement problems that

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54. To be precise, Q will save an amount x such that at interest rate r, $\$50{,}000 - x = \$10{,}000 + x(1 + r)^n$, where n equals the number of years from period 1 to period 2.

55. *See* Kelman, *supra* note 25, at 673-76.

would usually weigh against taking account of the subjective utility of wealth for tax purposes would again be somewhat less troubling here, as the portion of the discount rate attributable to X's having to endure an uneven consumption stream would by definition exactly compensate for the disutility this burden entails. But again, it seems hard to justify taking subjective utility into account in the case of savings, given our refusal to consider it elsewhere in the tax system.[56]

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56. A number of other hypotheses of savings behavior have been offered, including the suggestion that savers save in order to make bequests and other intergenerational transfers ("bequest savers"); that they save to protect against disease and other hardships of old age ("precautionary savers"); that they demand interest as compensation for the risk they will die before future period consumption ("risk of death savers"); that they save a fixed percentage of their income irrespective of interest rates ("rule of thumb savers"); that they save only when their income is increasing at a faster rate than their taste for consumption ("disequilibrium savers"); and that they save only the residual amount above what is required to maintain their relative status positions in the community (a Veblenesque view of savings behavior, updated in JAMES S. DUESENBERRY, INCOME, SAVING AND THE THEORY OF CONSUMER BEHAVIOR (1949)). On bequest and precautionary savers, see LAURENCE J. KOTLIKOFF, WHAT DETERMINES SAVINGS? 39-162 (1989); Kotlikoff, *supra* note 53, at 41-58. On risk of death, disequilibrium, and Veblenesque (or Duesenberry) savers, see Kelman, *supra* note 25, at 660-75. On rule of thumb savers, see Lawrence H. Summers, *The After-Tax Rate of Return Affects Private Savings,* 74 AM. ECON. REV., May 1984 (papers & proceedings), at 249, 250.

Most of these hypotheses fit comfortably within the analysis already offered in the text, and readers who have already had their fill can probably skip the balance of this footnote in good conscience. For those few hardy souls who have not, what follows is a brief sketch of how the "perfected income tax" argument would play out with respect to each of them.

The first three hypotheses (concerning bequest, precautionary, and risk of death savers) all fit within a conventional marginal analysis, in that they assume that the price demanded ex ante by the marginal saver exactly compensates for the expected decline in the value of future consumption. For risk of death savers, like "abstinence" savers, "lower value of deferred consumption" savers, and life cycle savers whose earnings are lower in early years, interest compensates for attributes of deferred consumption that make it less attractive at the start than present consumption. For bequest and precautionary savers, on the other hand, like life cycle savers whose earnings are higher in early years, deferring consumption is initially an attractive tradeoff—that is to say, these savers would save some amounts of money at low or even negative interest rates in order to provide for desired bequests or protect against calamities in old age. However, for the *marginal* units saved by such savers, the benefits of present consumption outweigh the benefits of saving for bequests or precautionary purposes by the amount of the interest rate. That is to say, the prevailing interest rate is the minimum payment demanded for the utility loss endured by trading off one more unit of present consumption for future wealth. Thus, the arguments for and against not taxing interest to bequest, precautionary, and risk of death savers are identical to those for the other savers discussed in the text: Interest compensates for the expected disutility at the margin from trading off present consumption for future wealth.

There is, however, one important difference in the case of precautionary and risk of death savers. For these savers, unlike the other savers considered, the expected (ex ante) decline in the value of future consumption for which interest is demanded reflects the weighted probabilities of divergent ex post results. In the case of risk of death savers, the divergent possibilities are survival to enjoy future consumption, where such consumption has a utility equal to that of present consumption, versus death, which destroys all utility from future consumption (assuming that no utility is derived from bequests). In the case of precautionary savers, the possibilities are a financially disastrous old age, for which increased savings are even more valuable than anticipated, versus a relatively carefree one, for which they are far less valuable than the earlier consumption forgone. As a result, in both cases, unlike the other hypotheses for savings behavior considered above, the actual ex post positions of most savers in each group will diverge from their expected ex ante positions: One portion of each group will be better off than expected as a result of the marginal decision to save, and another will be worse off than expected. For an exploration of the equity issues raised by that ex ante/ex post split

E. *Inframarginal Savers and Returns to Risk*

As noted above, the argument for a consumption tax as a perfected income tax has implicitly focused on the case for exempting the real riskless rate of return to the marginal saver, ignoring the problems of inframarginal surplus and positive and negative returns to risk. Given the significant disparities in ex post wealth thereby disregarded, it is not self-evident that a consumption tax would move us closer to a perfected income tax than our current, admittedly imperfect scheme, even if we grant the arguments above for exempting the pure interest component of the marginal saver's return.

1. *The inframarginal saver.*

Consistent with classical (premarginalist) price theories, the original Seniorian version of abstinence theory assumed that forbearance from current consumption imposed on all savers a psychic cost equal to the market price of interest. To translate it to modern terms, the argument assumed that the supply price demanded for loaning capital was perfectly elastic across its entire range, equal at each point to the market rate of interest. By definition, then, whatever persuasiveness the Seniorian argument had extended to all savings.

That assumption was undone by the marginal revolution, which made clear that the cost of deferring consumption (measured by the reservation price of the saver) equals the market rate of interest only for the marginal saver, the implicit hero of all of the arguments above. For inframarginal savers, whose reservation price is by definition less than the market rate of interest, a portion of the interest payment represents pure surplus.[57] Thus,

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in the context of risk of death savers, see Kelman, *supra* note 25, at 660-69. For a discussion of similar problems raised by the premia demanded ex ante for risky investments, see Part II.E *infra*.

The last three hypotheses (concerning rule of thumb, disequilibrium, and Veblenesque savers), unlike all the other hypotheses previously discussed, assume savings behavior that is *non*marginal with respect to interest rates. In other words, each assumes that the class of savers described will save the identical amount at lower, or even zero, interest rates. As a result, the entire return to savers is arguably surplus. If so, the case for exempting interest to those groups under a "perfected" income tax seems far weaker than with respect to savers whose motivations conform to any of the previously discussed theories. For a thoughtful discussion of this point with respect to disequilibrium and Veblenesque savers, see Kelman, *supra* note 25, at 675-79. Obviously, none of these three hypotheses alone could account for the existence of a positive interest rate. That would require the presence of other savers, whose decisions are influenced by interest rates, and whose supply price at the margin (in conjunction with demand) sets the marginal interest rate.

57. If the price of capital is purely demand-driven at the margin (that is, if the demand for loanable funds intersects the supply curve at a point where supply is inelastic), a portion of interest payments would represent a surplus over cost even for the marginal saver. On the historical development of Böhm-Bawerkian demand-side theories of interest, see MARK BLAUG, ECONOMIC THEORY IN RETROSPECT 527-34 (1978). For a contemporary treatment, see Kelman, *supra* note 25, at 670-79. Most economists have rejected a pure demand-side explanation of interest rates. *See, e.g.,* Summers, *supra* note 56. Consistent with that view, the discussion in Parts II.B and II.C above assumed that the marginal saver received no surplus over reservation price. If that assumption is incorrect, this would further undermine the arguments for adopting a consumption tax as a perfected income tax, as it would mean that, even granting the premises of abstinence theory or the declining utility of deferred consumption, a consumption tax would undertax the ex post wealth of even the marginal riskless saver, as compared to the marginal spender.

building on the original example of Saver and Spender, assume we have another saver, Infrasaver, who has $100 to save, has a personal discount rate of 6 percent, and faces a market rate of interest (set by Saver's discount rate) of 10 percent. In year 2, Infrasaver will end up with a bundle of goods worth $104, as compared to $100 for Saver or Spender.[58] A perfected income tax—if one were to take the notion seriously—should tax the $4 surplus as a clear accretion to wealth to Infrasaver.

The problem, obviously, is how to isolate that surplus in practice. An earlier generation of progressive economists, sympathetic in principle to a tax targeting inframarginal savers' surplus, ultimately concluded that the problem was intractable, and that a choice had to be made either to treat *all* interest or *none* as unearned.[59] Whether for practical reasons, or from a general sense that the tax system ought not to take account of inframarginal taxpayers, most contemporary commentators have likewise assumed that the "cost of deferral" argument for a consumption tax must disregard inframarginal savers, and stand or fall on its applicability to the marginal case.[60]

The readiness of commentators, past and present, to ignore the problem of inframarginal surplus is somewhat perplexing. First, the customary arguments for ignoring *consumers'* surplus do not necessarily carry over to savers' surplus, given that in the former case, the surplus is psychological and the costs are financial, and in the latter case, the surplus is financial and the costs are psychological.[61] Second, depending on the identity of the taxpay-

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58. If we assume that Infrasaver's personal discount rate reflects the pain of abstinence, in year 2 Infrasaver will have $110 worth of future consumption, minus $6 in pain from forbearing from present consumption. If we assume the discount rate reflects the lower utility of later consumption, in year 2 Infrasaver will have $104 worth of utility from $110 in explicit consumption.

59. For support in principle of taxing the inframarginal savers' surplus on fairness grounds, see ROBERT LEE HALE, *Economic Theory and the Statesman, in* THE TREND OF ECONOMICS 191, 203 (Rexford G. Tugwell ed., 1924); L.T. HOBHOUSE, THE LABOUR MOVEMENT 59-62, 74-78 (2d ed. 1906); JOHN A. HOBSON, THE ECONOMICS OF DISTRIBUTION 309-35 (1916); JOHN A. HOBSON, THE INDUSTRIAL SYSTEM: AN INQUIRY INTO EARNED AND UNEARNED INCOME 227-32 (2d ed. 1910); J.A. HOBSON, TAXATION IN THE NEW STATE 77 (1919); ALFRED MARSHALL, PRINCIPLES OF ECONOMICS app. K at 830-31 (8th ed. 1920); 2 F.W. TAUSSIG, PRINCIPLES OF ECONOMICS 516-17 (1911). The attack on inframarginal savers' surplus in the early part of the century was part of a broader Progressive attack on "unearned" incomes in any form, whether accruing to land, labor, or capital. For a discussion of the Progressive rent theory movement and its influence on tax legislation in England and the United States, see Fried, *supra* note 28, ch. 4.

In England, the difficulty of isolating inframarginal savers' surplus was resolved in the 1907 and 1909 Labor budgets by treating all interest income as "unearned" and subject to a higher rate of tax than wage income. *See* F. SHEHAB, PROGRESSIVE TAXATION: A STUDY IN THE DEVELOPMENT OF THE PROGRESSIVE PRINCIPLE IN THE BRITISH INCOME TAX 246-52 (1953). In the United States, the "earned income" credit in effect from 1924-1931 and 1934-1941, ranging from 10% to 25% of the tax due on the first $10,000 to $30,000 of "earned" (generally, wage) incomes, was a gesture in the same direction. However, as certain amounts of unearned income were presumed to be earned income for these purposes, the differential effects of the credit were relatively modest. *See* U.S. DEPARTMENT OF TREASURY, THE TAX TREATMENT OF EARNED INCOME (1947).

60. *See, e.g.,* Klein, *supra* note 29, at 470; Warren, *supra* note 12, at 937; *cf.* Kelman, *supra* note 25, at 657 n.23 (arguing that deviation from the general rule would be justified only if all or nearly all savers were inframarginal, or if there were a distributional bias in inframarginal savings that could not be counteracted by adjustments to the general rate structure).

61. To the extent that objections to taxing surplus rest on its illiquidity, surplus in the form of

ers holding marginal and inframarginal investments, it is conceivable that a rate structure *could* be devised that isolated inframarginal surplus. If, for example, inframarginal investments are disproportionately held by wealthy taxpayers and marginal savings by the less well-off,[62] an income tax with an exemption for the first x dollars earned (with x set high enough to cover the bulk of annual interest income to lower- and middle-income taxpayers) could effectively exempt the bulk of marginal and near-marginal savings from taxation, while taxing the bulk of inframarginal savings.[63]

Third, even if it is impossible to isolate inframarginal savings, that still leaves two choices. We can undertax the aggregate class of savers under a consumption tax, or we can overtax them under an income tax. Given that both choices equally depart in principle from a perfected income tax, it is difficult to see any a priori fairness argument for preferring the former to the latter.[64] Empirical evidence regarding the shape of the supply curve (and

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a cash payment in excess of psychological costs obviously does not pose the same problems as surplus in the form of psychological benefits. To the extent the concern is with measurement problems, even though the psychological cost to savers and the psychological benefit to consumers might be equally difficult to measure, we might more happily tolerate the possibility of overtaxing in the latter case, where the effect would be, at worst, to undercount psychological costs rather than overestimate psychological benefits. Both of the foregoing points, however, may simply express in another form doubt as to whether psychological costs and benefits should be counted at all.

62. The argument here is not that the class of marginal *savers* is disproportionately made up of the less well-off. Under conventional marginalist analyses of savings behavior, every taxpayer is assumed to be a marginal saver with respect to the last dollar she opts to save under prevailing interest rates. *See* note 24 *supra* and accompanying text. The argument is rather that marginal or near-marginal *savings* are disproportionately held by the less wealthy, and inframarginal *savings* by the wealthy. The intuition behind the argument is that the value of current consumption (and hence the disutility of deferring it) declines as the level of consumption rises, until—having run out of enticing consumption ideas entirely—the Rothschilds of the world would save at a negative interest rate, if necessary. For typical expressions of this view, see J. STAMP, *supra* note 29, at 56-57 ("If a man is so rich that he finds it hard work to spend his money and it accumulates almost without effort on his part, is it any reason why his taxation should be restricted [to expenditure]?"); *see also* I. FISHER, *supra* note 26, at 72-76; JOHN MAYNARD KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST AND MONEY 96 (1958). As savings represent consumption deferred to the future, not consumption forgone, for both rich and poor the intuition depends on the assumption that the current income effect dominates the future income effect—that is, that savings levels will correlate positively with current income (with the poor dedicating most of their income to meet current needs) and not with future anticipated income level (leading the poor to set aside a relatively greater proportion of their income to provide for future needs). That assumption is obviously open to dispute. For the contrary view, concluding that rich savers are more sensitive to interest rates than poor savers, see N. KALDOR, *supra* note 5, at 92; 2 F.W. TAUSSIG, *supra* note 59, at 517.

63. From 1954 until 1986, such an exclusion existed for dividends received. *See* Internal Revenue Code of 1954, Pub. Law 591, ch. 736, § 116(a), 68A Stat. 3, 37 (exempting the first $50 of dividends received), *amended by* Revenue Act of 1964, Pub. Law 88-272, § 201(c), 78 Stat. 19, 32 (increasing the amount exempted to $100), *repealed by* Tax Reform Act of 1986, Pub. Law 99-514, § 612(a), 100 Stat. 2085, 2250. The apparent purpose of the exclusion, however, was to alleviate the double taxation of dividends, not to respond to the considerations suggested in the text. For legislative history of the 1954 and 1964 acts, see H.R. REP. No. 1337, 83rd Cong., 2nd Sess. 5-7 (1954), *reprinted in* 1954 U.S.C.C.A.N. 4025, 4030-32; H.R. REP. No. 749, 88th Cong., 2nd Sess. 1 (1964), *reprinted in* 1964 U.S.C.C.A.N. 1313, 1340-42. For related proposals for an income or wealth tax that would exempt only that portion of savings that reflects deferred consumption (rather than, say, future bequests), see Andrews, *Fairness and the Personal Income Tax: a Reply to Professor Warren, supra* note 14, at 957-58.

64. There is conceivably an argument on horizontal equity grounds, if we fail to tax the inframarginal surplus of spenders. *See* notes 132-137 *infra* and accompanying text.

hence the extent of inframarginal surplus) might well tip the balance in one direction or another. If, for example, the bulk of savings were marginal, so that the bulk of interest paid were compensation for the costs of deferral, the case for a consumption tax as a perfected income tax would surely be strengthened. But no evidence supports that conclusion, and proponents of a consumption tax have in any event shown little interest in the empirical data one way or the other.

2. *Returns to risk.*

More troublesome than the problem of the inframarginal saver is the fact that a consumption tax disregards ex post disparities in wealth for winners and losers in risky investments.

Investment returns include three components: an inflation premium, the real, riskless rate of interest, and positive or negative returns to risk. As suggested above, the fairness argument for exempting the return to Saver in the original example deals only with the second component: Saver is presumed entitled to exclude that portion of her actual (ex post) return that compensates for the cost of deferring consumption. By hypothesis, this cost is equal to the price demanded ex ante for bearing it, or the riskless interest rate.

Debates on the relative merits of a consumption tax and an income tax largely ignore the effects of the first component, inflation, treating the positive return to capital as a real return in constant dollars. Proponents of the perfected income tax defense of a consumption tax are no exception. The omission is understandable, and not troubling as a theoretical matter. Given the universal agreement among serious tax scholars that a properly designed income tax would exempt inflation returns,[65] consideration of the fairness of a consumption tax per se has properly focused on the real return to capital in excess of inflation. Moreover, for precisely the reasons it is universally agreed that an income tax should exempt inflation returns, a perfected income tax version of a consumption tax should exempt them as well. They do not represent a real accretion to wealth, but merely compensate for the decreased real value of the principal.[66] The failure to deal with inflation explicitly does, however, obscure a central practical difficulty with the argument for a consumption tax as a perfected income tax: the argument is about almost nothing. The most recent reliable study of interest rates has found that the real, riskless rate of return over the past 65 years has averaged

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65. *See, e.g.,* Daniel Halperin & Eugene Steuerle, *Indexing the Tax System for Inflation, in* UNEASY COMPROMISE: PROBLEMS OF A HYBRID INCOME-CONSUMPTION TAX, *supra* note 3, at 347, 348-53; INFLATION AND THE INCOME TAX (Henry J. Aaron ed., 1976); U.S. DEPARTMENT OF TREASURY, TAX REFORM FOR FAIRNESS, SIMPLICITY AND ECONOMIC GROWTH 17, 77, 111, 160 (1984); Warren, *supra* note 7, at 1089 n.29.

66. The argument for exempting inflation returns is just a more persuasive variant of the "decreased value of future consumption" argument described above. In the latter case, the decreased value of future consumption is assumed to come from a decline in the utility of identical acts of consumption over time. In the former case, it comes from a decline in the purchasing power of the dollar over time.

just one-half of one percent.[67] At that rate of return, an income tax—even one at relatively high rates—will have a negligible effect on savers, measured by the percentage decline in their aggregate wealth from a no-tax world.[68] But over the same period, the annual risk premium for an investment in common stock averaged 6.4 percent.[69] Assuming that historical experience holds true roughly in the future, any fairness concerns posed by a tax on the real, riskless return are surely dwarfed by concerns as to the appropriate treatment of returns to risk.

In that respect, it has generally been assumed that an income tax comes much closer to a true measure of ex post accretions to wealth than a consumption tax.[70] The assumption rests on the simple fact that an income tax takes account of the different ex post positions of individual winners and losers who (ex ante) faced the same investment choices, while a consumption tax levies an equal tax (explicitly or implicitly) on both.[71]

At the same time, it is at least arguable that on an *aggregate* basis a

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67. IBBOTSON ASSOCIATES, STOCKS, BONDS, BILLS AND INFLATION: 1991 YEARBOOK 140-41 (1991). The riskless rate of return is calculated by comparing the return on short-term treasury bills with the inflation rate over the same period, and averaging the results over a number of years. The real, riskless rate of return has been at a historic high for the past five years, possibly reflecting a lagged response to the negative real rate of return during the historically high inflation of the late 1970s. Without the last five years factored in, real interest rates from 1940-1985 averaged only 0.3%. IBBOTSON ASSOCIATES, STOCKS, BONDS, BILLS AND INFLATION: 1986 YEARBOOK 62 (1986). For a discussion of the methodology used in the Ibbotson studies and the design problems in earlier studies that found somewhat higher real rates, see Bankman and Griffith, *supra* note 29 (manuscript at 21-22).

68. As Bankman and Griffith note, $100 invested at 0.5% will grow to $105 at the end of 10 years. If the annual return is reduced to 0.25% as the result of a 50% income tax on earnings, the amount available at the end of 10 years will be $102.50, reflecting only about a 2% decline in terminal wealth from a no-tax world. Bankman & Griffith, *supra* note 29 (manuscript at 22).

69. IBBOTSON ASSOCIATES, STOCKS, BONDS, BILLS AND INFLATION: 1986 YEARBOOK, *supra* note 67, at 55.

70. *See, e.g.,* Michael J. Graetz, *Expenditure Tax Design, in* WHAT SHOULD BE TAXED: INCOME OR EXPENDITURE?, *supra* note 3, at 161, 170-72; Warren, *supra* note 7, at 1101-03.

71. In the case of a yield-exempt version of a consumption tax, demonstrating the different results under an income and consumption tax is fairly straightforward. Assume a 50% income tax and a 50% (yield-exempt) consumption tax, and two taxpayers, Lucky and Unlucky, each of whom earns $200 in wages, reduced to $100 after-tax. Each invests her $100 in after-tax wages in a risky investment with a 50% chance of winning $100 (that is, doubling in value) and a 50% chance of losing $50 within the same taxable period. Lucky's investment pays off, yielding $200 total end wealth; Unlucky's does not, yielding $50 total end wealth. The results under a consumption tax and an income tax are as follows:

	Yield-exempt Consumption Tax	Income Tax
Lucky		
After-tax proceeds to invest	$100	$100
Gross yield on investment	200	200
Tax (50% of gain)	0	50
After-tax yield	200	150
Unlucky		
After-tax proceeds to invest	$100	$100
Gross yield on investment	50	50
Tax (reimbursement of 50% of loss)	0	(25)
After-tax yield	50	75

consumption tax is a more accurate measure of the return from risky investments than an income tax, even if the income tax provides for full deductibility of losses. If the risk premium demanded by the market reflects an incremental cost of bearing risk that survives ex post, the class of marginal investors in risky assets is arguably no better off ex post than the class of marginal investors in riskless assets, notwithstanding the higher explicit wealth of the former.[72] An income tax levied on explicit wealth will therefore overtax the aggregate well-being of high-risk investors relative to low-risk investors (as well as to current marginal spenders) by the amount of the risk premium. A consumption tax, by exempting the entire return to risk, will accurately measure aggregate wealth ex post to the extent that the market performs as anticipated.[73]

This raises at least three questions: (1) whether the risk premium reflects an ex post cost that *ought* to be accounted for in a perfected income tax; (2) whether it is possible to account for this cost on an individual basis under an income tax by modifying the measure of ex post income; and (3) if not, whether the aggregate fairness achieved by a consumption tax is preferable to the (admittedly imperfect) results under an income tax. All three questions raise complicated issues, and a full exploration of them is beyond the scope of this paper. A few preliminary observations, however, may be helpful.

The argument for exempting the portion of the return to risk equal to the risk premium has obvious parallels to the "abstinence" and "cost of deferral" arguments for exempting the riskless interest rate. In each of these cases, the compensation demanded ex ante to bear an incremental cost is treated as leaving the marginal saver no better off ex post, because her increase in explicit wealth is offset by an equal implicit cost. But precisely how persuasive this argument is with regard to risk premia depends in large part

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As the above numbers indicate, under a consumption tax Lucky and Unlucky bear the same present value tax burden of $100, notwithstanding the disparities in their ex post wealth ($200 versus $50). That follows necessarily from the fact that a yield-exempt version of a consumption tax explicitly ignores the ex post results of investments. Under an income tax with full loss offsets, Lucky pays a (present value) tax of $150 and Unlucky pays $75. Even with partial or no deductibility of losses, an income tax, by taxing winners more heavily than losers, will reflect more accurately ex post disparities in wealth than will a consumption tax.

In the case of a cash-flow consumption tax, the result is the same but the demonstration somewhat more complicated, since any illustration depends on recognizing that the explicit tax levied on the full amount of ex post winnings under a cash-flow tax merely substitutes for the tax forgone on the original wages invested, leaving Lucky and Unlucky with the same end wealth as under a yield-exempt tax. *See* Warren, *supra* note 7, at 1102-04.

72. For comments in passing that seem to point to this conclusion, see N. KALDOR, *supra* note 5, at 59 (arguing that a fair tax should take into account the psychic income savers derive from returns, based on their own valuation of risk factors); Erik Lindahl, *The Concept of Income, in* ECONOMIC ESSAYS IN HONOUR OF GUSTAV CASSEL 399, 402 n.* (Augustus M. Kelly 1967) (1933).

73. It should be noted there is no reason to expect that the market *will* perform as anticipated. Like any diversified portfolio, the diversification of the market will offset the risk characteristics of individual investments, but not the systematic risk inherent in the market as a whole. Thus, one would expect actual results over any given period for the aggregate class of investors to diverge from anticipated results.

on the nature of the cost for which they are compensating—that is, on the source of the risk aversion.

Before examining that question, however, it should be noted that there is a crucial difference between the effects of a tax on risky returns and a tax on riskless returns that undercuts the argument for exempting returns to risk from taxation no matter how we characterize the source of risk aversion. An income tax decreases the after-tax return to risk, but at the same time it also decreases risk (measured by the standard deviation of potential outcomes from the mean expected return) by shifting a portion of it onto the government. Viewed from that perspective, the portion of the positive and negative returns claimed by the government might more properly be thought of not as a tax at all, but merely as the aliquot share of winnings and losses to which the government is entitled as an involuntary coinvestor.

An example will clarify the point. Assume a marginal investor in a no-tax world has invested $100 in a risky asset which has a 50 percent chance of paying $200 and a 50 percent chance of paying $50. The investment has an expected yield of $125,[74] with a standard deviation of $75. Assume further (for simplicity's sake) that the riskless interest rate is zero, so that the entire expected return on capital of $25 represents the risk premium demanded by the marginal investor. If a 20 percent income tax is imposed with full loss offsets (so that the government will take 20 percent of the earnings and reimburse 20 percent of the losses), the investment will have a 50 percent chance of paying $180 *after-tax*[75] and a 50 percent chance of paying $60 *after-tax*[76] for an expected after-tax yield of $120.[77] The expected return on the taxpayer's investment has declined 20 percent (from $25 to $20). But the standard deviation has declined 20 percent as well (from $75 to $60), reflecting the portion of upside and downside risk shifted onto the government. In short, an income tax will reduce the *riskiness* of the taxpayer's investment proportionate to the reduction in the investment's expected return.

Two conclusions follow from that observation. First, in an income tax with full loss offsets where the borrowing and lending rate for capital is equal and the cost of risky investments remains constant, it is possible for the marginal investor to put herself back in the same position she held in a no-tax world—in other words, to achieve the same expected return *with the same*

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74. That is, (0.5 x $200) plus (0.5 x $50).

75. That is, $200 pre-tax yield minus (0.2 x $100) tax on gain.

76. That is, $50 pre-tax yield plus a reimbursement of (0.2 x $50) loss.

77. This assumes that the imposition of an income tax will not change the pre-tax price of risky investments. The assumption is not a trivial one, however. As noted below, the likely effect of a tax on risk is to increase the demand for risky assets. *See* text accompanying notes 78-79 *infra*. The increased demand will (all other things remaining constant) drive up the price of risky assets, and hence drive down their expected return. This result could be avoided only if the supply of risky assets were simultaneously increased as well. This could be accomplished only if the government dumped back onto the capital market the slice of risk it assumed in imposing the tax, by, in effect, short-selling its future expected tax revenues. *See* LOUIS KAPLOW, TAXATION AND RISK TAKING: A GENERAL EQUILIBRIUM PERSPECTIVE 3-4 (National Bureau of Economic Research Working Paper No. 3709, 1991); Jeremy I. Bulow & Lawrence H. Summers, *The Taxation of Risky Assets,* 92 J. POL. ECON. 20 (1984).

level of risk—simply by increasing the riskiness of her portfolio of assets.[78]
Where that possibility exists, it is difficult to see any argument for the unfairness of a tax on risk premia, since the effects of the tax can be eliminated entirely.

Second, even where an investor cannot adjust her portfolio to counteract fully the effects of a tax, her anticipated costs of bearing risk will be lowered by the tax itself. This is in obvious contrast to the pure time preference argument, where a tax lowers the *return* to deferred consumption but not the cost. Assume, for example, that the marginal investor above held a portfolio of $100 investments, all with a 50 percent chance of yielding $200 and a 50 percent chance of yielding $50. Assume further that the portfolio as a whole performs as expected, with winners equalling losers, for an average (pre-tax) return on investment of $25. In a no-tax world, the entire return (equal to the ex ante risk premium) merely compensates the investor for her risk aversion. After imposition of a 20 percent income tax, the return is reduced to $20. But the imposition of the income tax has simultaneously reduced the level of risk to one that the new marginal investor would price at $20—the after-tax premium the market offers for bearing it—shifting the remaining risk to the government. Whether *this* investor would price it at $20 depends on her individual risk preferences. If (in the most likely case) her risk aversion increases nonlinearly with the level of risk, so that a 20 percent increase in the riskiness of an investment would increase the investment's disutility by more than 20 percent, she would price the risk *below* $20. That is to say, the formerly marginal investor would now be inframarginal with respect to risk. The tax reduces the investor's overall wealth, by reducing her risk-taking below its optimal (marginal) level.[79] As suggested above, the formerly optimizing investor's rational response in such a situation would be to increase the pre-tax level of risk until she is again marginal. But from the narrow perspective of a perfected income tax, which looks to whether an increase in explicit wealth exceeds the marginal costs of generating it, the investor has no complaint even if she does not adjust the riskiness of her portfolio. As the tax has reduced the cost of risk more than it has reduced the return, the $20 after-tax premium will generate a surplus over the marginal costs of bearing the risk.

In either case—that is, with or without portfolio adjustments—the effect of an income tax will be to leave the marginal investor in a no-tax world in at least as good a position after-tax, when measured by the difference between expected return and anticipated costs.

But does this dispose entirely of any argument that an income tax un-

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78. *See* L. KAPLOW, *supra* note 77, at 12-14; Roger H. Gordon, *Taxation of Corporate Capital Income: Tax Revenues Versus Tax Distortions,* 100 Q.J. ECON. 1 (1985); Warren, *supra* note 7, at 1104-05; Bankman & Griffith, *supra* note 29 (manuscript at 31).

79. This assumes that the marginal risky investor in a no-tax world would be able to select an optimal level of risk to begin with. If, however, the marginal investor cannot *adjust* the level of risk to compensate for the effects of the tax, perhaps because of the lumpiness of investment opportunities, there is no reason to assume that she would have been able to assemble an initial portfolio in the no-tax world that optimized her risk preferences.

fairly overtaxes the true marginal return to risk? Perhaps not, for two reasons. First, to describe a tax on risky investments as no tax at all, but rather as the division of profits and losses among involuntary coinvestors, arguably puts the cart before the horse. It is true that an income tax with full loss offsets effectively makes the government a full partner in taxpayers' risky investments, thereby leaving the marginal investor in no worse an expected position than in a no-tax world. Nevertheless, it might be argued that this effect cannot justify the decision to impose the tax in the first place. Such a decision must rest on a prior determination that explicit returns to risk in a no-tax world are a genuine accretion to wealth. Thus, to take the case of the risky investor whose ex post return equals the ex ante risk premium, while an income tax may not worsen her position, if the premium does not leave her better off than those who invest in riskless assets or consume their wealth currently, we have no justification for imposing the tax to begin with.

Second, the argument proves only that the marginal investor's *expected* position in a no-tax world may be unchanged by imposition of an income tax. It does not necessarily mean that an income tax accurately measures the actual ex post positions of risky investors, compared either to investors in riskless assets or to current consumers. For both of the foregoing reasons, it is worth considering how returns to risk ought to be treated under a perfected income tax.

By definition, the premium that investors demand for investing in risky assets over and above the riskless return reflects compensation for the expected costs of bearing risk—that is, for risk aversion. The appropriate treatment of risk premia under a perfected income tax, therefore, depends in the first instance on the source of that aversion to risk.

At least three possibilities suggest themselves. First, risk aversion may reflect the psychological discomfort of enduring uncertainty while awaiting the outcome of an investment.[80] If so, the argument for exempting a portion of the ex post return to all investors equal to the risk premium closely parallels the "pain of abstinence" argument for exempting the riskless rate of return, and raises some of the same questions: Does the psychological cost of bearing uncertainty survive ex post in any meaningful sense, and is it the sort of cost the tax system ought to take account of?[81]

But it seems unlikely that risk aversion reflects the psychological pain of uncertainty. If it did, a gamble with an instantaneous payoff would carry no risk premium at all. Two other explanations seem far more plausible: that risk aversion reflects the declining marginal utility of wealth, so that from

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80. For a similar suggestion with respect to the compensation demanded for enduring the risk of death, see Kelman, *supra* note 25, at 661-62.

81. An additional note of skepticism might be in order here as to whether (as the theory assumes) winners as a class end up incurring the same psychological costs from risk-taking as losers. Even assuming that both bear the same cost from uncertainty during the bet, one suspects that for losers that cost is likely to be exacerbated by lingering ex post regret for risk-taking, while for winners it is likely to be substantially offset by ex post elation at having beaten the odds. But this is perhaps merely to express doubt that the pain of uncertainty could ever be the sole psychological significance of risk.

any given initial wealth the disutility of losing $x will outweigh the utility of gaining $x;[82] or that it reflects the higher psychological cost attached to losing what one already has than to failing to gain an additional advantage.[83] While either of these two hypotheses will result in investors' weighting losses more heavily than equal gains, starting from any initial position, the two are not the same. The first hypothesis assumes that the marginal utility of wealth to any individual declines monotonically over the entire range of wealth. As a result, starting from any given point of initial wealth a loss of $x will fall on a higher part of the utility curve than a gain of $x. Therefore, the disutility caused by the loss will exceed the utility created by the (equal) gain. The second hypothesis (what one might call the "endowment effect" hypothesis) assumes no generalizable utility curve for money for any individual—indeed, it at least implicitly refutes that such a thing exists. Instead, it argues that people attach a psychological cost to the very act of losing something they already have that is unrelated to the utility its possession generates and disproportionate to the pleasure that gaining an equal amount might generate. Thus, although intrapersonal comparisons rarely present themselves in this form in real life, it would be entirely consistent with the endowment effect hypothesis to find that while an individual might in general value the 10,000th dollar she receives far more highly than the 100,000th dollar, she might nevertheless attach a greater disutility to losing the 100,000th dollar once she had it than to gaining the 10,000th dollar for the first time.

Under both hypotheses, the argument for exempting risk premia would be that risky investors, although they receive a rate of return nominally greater than the riskless rate, actually derive no additional utility from it. The argument is obviously analogous to the "lower value of deferred consumption" argument above: Risky investors as a group are no better off ex post than riskless investors, not because the higher aggregate return is offset by an implicit cost of bearing risk, but because the higher return has no greater aggregate utility to begin with. As with the "lower value of deferred compensation" argument, however, treating riskless and risky investors as

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82. For an endorsement of the declining marginal utility of money as the source of risk aversion, see N. KALDOR, *supra* note 5, at 104. The argument is usually traced back to Bernoulli, who formulated it to explain the so-called St. Petersburg Paradox, which posed one variant of the puzzle as to why people would refuse a mathematically fair bet. The answer, Bernoulli argued, lay in the fact that the utility loss from an expected loss of the wagered amount would outweigh the utility gain from an equal expected gain, due to the diminishing marginal utility of money. Thus, people would rationally refuse to pay $1 million for a 50% chance of winning $2 million and a 50% chance of winning nothing. For an explanation of the Bernoulli hypothesis and subsequent modifications to take account of the fact that within certain income ranges people do in fact take fair and even losing gambles, see M. BLAUG, *supra* note 57, at 332-36.

83. This phenomenon, sometimes called "loss aversion," has been well documented in the experimental work in cognitive psychology of Kahneman, Tversky, and others. *See, e.g.,* Daniel Kahneman & Amos Tversky, *Choices, Values and Frames,* 39 AM. PSYCHOLOGIST 341 (1984); Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk,* 47 ECONOMETRICA 263 (1979). For a recent survey of the literature, see Daniel Kahneman, Jack L. Knetsch & Richard H. Thaler, *The Endowment Effect, Loss Aversion, and Status Quo Bias,* 5 J. ECON. PERSP. 193 (1991).

therefore alike for tax purposes would require that we tax wealth according to the subjective utility each taxpayer receives—something we have, as noted above, generally declined to do.

Assuming that a perfected income tax *ought* to take into account the psychological cost of risk under any of the three hypotheses, the question remains whether that is best done through a consumption tax. A consumption tax would accurately account for such cost on an aggregate basis, but would ignore the individual variations from the mean expected return for winners and losers. If the goal is a perfected income base, it would clearly be preferable to reflect the cost through modifications to a conventional income tax, thereby providing an accurate measure of individual as well as aggregate income from risk. Are such modifications possible?

Under the first hypothesis, the answer is, in theory, yes. If risk aversion reflects the pain of bearing uncertainty, the cost is by definition borne equally by all marginal investors, winners and losers alike. A conventional income tax could be adjusted to account for that cost both individually and in the aggregate, simply by adding an amount equal to the risk premium to the basis of all risky assets.[84] As a practical matter, however, one would have to know what the risk premium is for any given asset—a task that may present insurmountable administrative problems.

Under the second and third hypotheses, however, it may be impossible even in theory to extrapolate any useful information about the positions of individual winners and losers from information about investors' *aggregate* ex post well-being. That is clearly the case with the "declining marginal utility" hypothesis. The risk premium, under this hypothesis, reflects the *average* utility of all possible independent outcomes (winning everything, losing everything, and all positions in between), as compared to investing current wealth risklessly. But ex post, a given investor faces only one outcome—the aggregate return on her investments. The utilities assigned to all other possible outcomes ex ante, reflected in the composite risk premium demanded, are now irrelevant. The only figure that remains relevant, the utility assigned to the actual outcome, is impossible to deduce from the composite risk premium.[85]

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84. Thus, in the case of a $100 investment with an expected return of $125 in a no-tax world, an ex post payment of $130 would in the first instance generate a $5 taxable gain; a return of $120 would generate a $5 deductible loss. The foregoing analysis, however, is incomplete. A tax on gains and a deduction of losses (both measured against the $125 basis) will shift a portion of the upside and downside risk of investment onto the government, thereby reducing the variance of this risk. A reduction in variance will in turn drive down the premium demanded by the market for bearing risk (that is, the investment's expected return), and hence (assuming that the psychological cost of uncertainty varies with the amount of uncertainty) the psychological "cost" of risk itself to be added to the basis of the asset. Depending on tax rates and risk functions, the risk premium will presumably equilibrate somewhere between the riskless rate of return and the risk premium demanded in the no-tax world. It is this equilibrium premium that would be added to the basis of all assets.

85. An example may make this clearer. Assume a $50 investment with a 50% chance of yielding $100 and a 50% chance of yielding $25, and a riskless interest rate of zero. Assume a marginal investor makes two such investments, one of which wins and one of which loses. The investor ends up with a $25 profit from the two investments, exactly equal to the aggregate premium she demanded ex ante for making them rather than investing in a riskless asset that would guarantee a

Whether it is also impossible to identify the positions of individual winners and losers under a "loss aversion" theory depends on what one hypothesizes to be the nature of the aversion. If it reflects a disutility associated with losing ground from one's current position that does not vary with the amount lost, then the cost is borne ex post only by losers, and equally by all losers.[86] A perfected income tax could therefore reflect that cost accurately on an individual basis by taxing any return in excess of basis in full, and treating any loss of principal as generating a tax loss equal to the sum of (1) the risk premium divided by the probability of losing, and (2) the explicit loss.[87] It seems likely, however, that the aversion to loss does vary with the amount lost. If it does, we face the same difficulty as above in translating aggregate into individual experience. Under a perfected income tax, winners would still be taxed in full on their accretion to explicit wealth and losers given some deduction in excess of explicit losses, but the precise deduction appropriate for any given level of loss would be indeterminate.

Given the impossibility of determining the source of risk aversion and reflecting its cost accurately in a perfected income tax, is the aggregate accuracy achievable through a consumption tax preferable to a conventional income tax?[88] It is hard to see the argument for group fairness per se. Although our tax system has on rare occasion relied on aggregate (group) fairness as a justification for ignoring offsetting intragroup differences among taxpayers,[89] it is difficult to reconcile that notion of fairness with the predominantly individualistic premises of the tax system. Why should a taxpayer who suffers extraordinary losses for which a tax deduction is denied

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combined yield of $100. Yet it is clear that, however steeply the marginal utility of money declines for this investor, she is better off ex post with $125 than she would have been with $100. The apparent paradox is resolved by realizing that the $25 premium reflects the combined utilities of four possible outcomes (lose and lose, lose and win, win and lose, win and win) and not the utility of any one certain outcome (in this case, win and lose). While the existence of a risk premium reflecting the declining marginal utility of money tells us that the investor values winning $100 less than she disvalues losing the same amount, it tells us little more about the absolute or relative utility placed on winning that amount.

86. That is, a loss of any amount carries with it an additional disutility, above and beyond the explicit dollar loss from the mere act of losing, equal to the risk premium divided by the probability of losing.

87. Thus, in the case of a $100 investment with a 50% chance of returning some amount less than $100 and an expected return of $125, a return of $101 would yield a $1 taxable gain; and a return of $99 would yield a $51 deductible loss (that is, a $1 explicit loss; plus a $50 loss from the disutility of losing, equal to the risk premium ($25) divided by the probability of losing (0.5)). A return of $100 would yield no gain and no loss.

88. Again, as noted above, a consumption tax would be accurate in the aggregate only to the extent that the market performs as expected over the relevant period. *See* note 73 *supra*.

89. For an exploration of this issue as it pertains to the fairness of exempting interest as a compensation for the risk of death prior to the time of consumption, see Kelman, *supra* note 25, at 662-69. The example Professor Kelman discusses—treatment of annuitants under former I.R.C. § 72—is no longer the law. Under the 1986 Act, annuitants or their estates are now required to adjust ex post for any under- or overrecovery of capital under the prospective exclusion ratio provided in § 72(b). *See* I.R.C. § 72(b)(1)-(3) (1988). However, group rationality is at least one of the explanations still offered for the continuing failure under I.R.C. § 101 to tax ex post mortality gains and losses generated by the pure "insurance" component of life insurance. *See* I.R.C. § 101(a)(1) (1988); WILLIAM A. KLEIN, JOSEPH BANKMAN, BORIS I. BITTKER & LAWRENCE M. STONE, FEDERAL INCOME TAXATION 173-74 (8th ed. 1990).

take solace from the fact that another taxpayer with extraordinary winnings arising from a similar transaction escapes taxation altogether? Nevertheless, group fairness might be defensible as a reasonable approximation of individual fairness. If, over investors' lifetimes, risky investments generally take the form of repeat, independent gambles (such as lifetime stock purchases), the majority of investors should end up over time with an aggregate return on all risky investments converging toward the mean, with a minority (the tails of the distribution) ending up very big winners and losers. For the majority, a consumption tax would thus reasonably approximate individual fairness, at least on a lifetime basis.[90] To the extent one focuses on the minority outliers, however, a consumption tax will achieve greater aggregate fairness for risky investors, but only at the cost of far greater individual unfairness than under a conventional income tax. For that tradeoff to seem attractive, one would have to have more confidence that risk aversion ought to be counted as a cost for tax purposes than, one suspects, most people could muster.

Finally, the discussion until now has assumed an income tax with full loss offsets. In fact, of course, taxpayers' ability to use capital losses is curtailed by a number of provisions in the Code, including sections 1211 and 1212, which limit current deductions to capital gains income (plus $3000 of ordinary income in the case of individuals), with the unused balance carried over.[91] It is unclear how serious a limitation this poses in practice.[92] But any discussion of the appropriate treatment of risk under a perfected income tax must account for Congress's decision in principle to limit deductibility of losses while taxing gains in full. That decision raises two questions as to the consumption tax solution to risk. First, given that the limitations on loss deductions constitute a clear and deliberate departure from any conceptually defensible version of a perfected income tax, is it pointless to try to "perfect" the treatment of risk in other, more debatable respects? Second, would a consumption tax (by exempting all gains and losses from taxation) undo whatever we hoped to accomplish by the current asymmetrical treatment of gains and losses? The answer to both questions depends on the purpose of the loss limitations. If they are intended simply to raise additional revenue by overtaxing aggregate investment returns, a consumption tax would hardly

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90. For these investors, at least, there is a far stronger case for aggregate treatment of returns to risk than for investors in annuities or life insurance. Since in the latter cases the event (death) that triggers wins or losses is a singular event in all taxpayers' lives, each taxpayer will over her lifetime either win or lose the mortality gamble. There is no possibility of converging toward the mean by repeat, independent bets.

91. Corporations may in general carry unused capital losses back three years and forward five years. I.R.C. § 1212(a) (1988). Individuals may not carry unused capital loses back, but may carry them forward indefinitely. *Id.* § 1212(b). In addition, the "at risk" rules, *see id.* § 465, the limitations on utilization of passive losses, *see id.* § 469 (1988 & Supp. 1989), and the limitations on interest deductions, *see id.* § 163(d) (1988), all have the effect of limiting directly or indirectly the value of capital loss deductions.

92. *See* Rosanne Altshuler & Alan J. Auerbach, *The Significance of Tax Law Asymmetries: An Empirical Investigation*, 105 Q.J. ECON. 61 (1990); Joseph Bankman, The Effect of the Net Operating Loss Rules on Investment in the Venture Capital Industry (May 26, 1992) (unpublished manuscript, on file with the *Stanford Law Review*).

be more palatable than an income tax with full loss offsets. Indeed, assuming that the returns to risk over time are positive, a consumption tax would be far less palatable, since it would ignore all losses only at the cost of ignoring greater gains. On the other hand, if the loss limitations are intended instead to avoid asymmetric realizations of gains and losses, to avoid shifting market risk onto the government, or to prevent the use of passive (investment) losses to shelter wage income, a consumption tax may well be more palatable than an income tax with full loss offsets.

F. *Summary of the Perfected Income Tax Arguments*

For both the riskless interest rate and returns to risk, the case for a consumption tax as a means of implementing a perfected income tax—whatever the origin of the positive reservation price for deferral and risk—turns on the validity of using subjective utility as a measure of taxable wealth. For two of the explanations offered (traditional abstinence theory as an explanation of risk-free interest and the discomfort of bearing uncertainty as an explanation of risk premia), the claim is that, while the interest paid to savers is an admittedly valuable increment in explicit wealth, that increment is offset by the psychological costs of producing it. For the other explanations discussed, the claim is that savers' greater explicit wealth had no greater utility to begin with. That is to say, payment is demanded as compensation not for an actual psychological cost, but for an opportunity cost. In the case of interest, the opportunity cost is the cost of forgoing the pleasure of current consumption for the slightly lesser pleasure of future consumption. In the case of risk premia, the opportunity cost is the cost of forgoing a certain future return for an equal expected, but less certain, one.

It is obvious why such costs—actual or opportunity—should be counted for *efficiency* purposes. They (tautologically) measure the relative subjective values placed on present versus future consumption, or safe versus risky investments, thereby providing a measure of the deadweight utility loss from distorting taxpayers' choices between them through a tax on capital income. But the case for counting such costs on equity grounds is far less clear. It flies in the face of the almost universal acceptance by income and consumption tax advocates alike of explicit wealth rather than utility as the appropriate measure of taxable capacity. For income tax advocates, such acceptance is reflected in the definition of the tax base as the annual increments in the *market value* of one's wealth. For consumption tax advocates, it is reflected in the definition of the tax base as the *market value* of rights exercised annually in consumption.[93] It also flies in the face of consumption tax propo-

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93. *See* I. FISHER, THE NATURE OF CAPITAL AND INCOME, *supra* note 9, at 165-79; I. FISHER, *supra* note 26, at 3-6; N. KALDOR, *supra* note 5, at 27-29; H. SIMONS, *supra* note 1, at 50. At least some economists have embraced explicit wealth (whether measured by accretion or consumption) as a tax base *only* as a proxy for utility. Irving Fisher, for example, stated that the psychic pleasure of things is measured by placing "a valuation in terms of money . . . on them," and offered this description of the process:

To accomplish this appraisement it is only necessary for the individual to answer the ques-

nents' willingness to ignore the psychic costs of producing other forms of income, most notably the psychic cost of labor. Given the persistent resistance to anything but an objective measure of wealth in other contexts in constructing a tax base, it is somewhat puzzling why the argument for a utility measure here has been accorded as much respect as it has over the past 100 years. One suspects that for at least some proponents of a consumption tax, the answer may lie in an unexamined reliance on the implicit logic of an efficiency analysis to sustain an equity argument.

With respect to the riskless interest rate, the usual measurement problems that argue against a utility measure of wealth are less vexing. One can assume that the ex post disutility to the marginal saver—whatever its psychological origin—is by definition always equal to the explicit benefit derived. But the same could be said of the marginal return to labor. Moreover, objections to a utility-based tax system have not been solely administrative. While some proponents of explicit wealth as a tax base have endorsed it only insofar as it provides a workable proxy for utility,[94] their view is by no means universal. The Hobbesian foundational argument for a consumption tax, for example, regards explicit levels of consumption as the ultimate object of taxation.[95] Other grounds have been offered as well for rejecting utility as an appropriate measure of taxable capacity, including the belief that people ought to be treated as distinct from their product, and the belief that people care most about the resources others have available for consumption, rather than the pleasure they derive from that consumption.[96] None of this precludes the possibility that one could defend a utility-based measure of taxable wealth in general, or even defend it solely with respect to the marginal decision to save, reverting to an objective measure for all other purposes.[97] Both arguments, however, have yet to be made by consumption tax proponents.

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tion what money is he willing to pay for any enjoyment brought about by means of external wealth, such as a box of sweets or a cigar. If the event is one which cannot be connected with purchasable commodities, it is necessary to imagine an exchange, even when actual exchange is impossible.

I. FISHER, THE NATURE OF CAPITAL AND INCOME, *supra* note 9, at 177; *see also* Robert Murray Haig, *The Concept of Income—Economic and Legal Aspects, in* THE FEDERAL INCOME TAX 2 (Robert Murray Haig ed., 1921); RICHARD W. TRESCH, PUBLIC FINANCE: A NORMATIVE THEORY 265-71 (1981). But even in these cases, if economists are willing to commit to wage income as a proxy for utility (thereby ignoring at least directly the psychic disutility of labor), the same commitment would seem to be in order with respect to income from capital. While some economists have supported in principle the use of utility as a tax base, none has seriously suggested putting the proposal into practice. *See* note 134 *infra.*

94. *See* note 93 *supra.*

95. *See* note 6 *supra* and accompanying text.

96. Strnad, *supra* note 52, at 1094 n.159; Warren, *supra* note 7, at 1096-97.

97. For discussions assuming utility to be the appropriate tax base, see the sources cited at note 134 *infra.* As to the possibility of defending a utility-based measure only with respect to interest, one could argue that the very fact that the market has put an objective price on the decreased utility of future relative to present consumption differentiates this claim from most other claims for utility-based measures, where the tax system would have to account for the differing individual valuations placed on identical commodities. But again, that fact does not differentiate this claim from the claim that we should account for the subjective disutility of labor.

Although fairness arguments have focused almost exclusively on the real riskless interest rate, historically this rate has accounted for a relatively small portion of the total real return to capital, the balance of the return being attributable to premia paid on risky investments. With respect to risk premia, the case for a consumption tax as a perfected income tax seems far weaker than with respect to the riskless rate of interest. As with interest, there is reason to doubt whether a perfected income tax ought to take account of the disutility associated with risk. But there are additional problems as well. First, assuming full deductibility of losses, a tax on risk reduces the riskiness of an investment to the individual holder, and thus reduces the investment's disutility along with its expected return. As noted above, that effect has two consequences. Assuming a constant price for risky assets,[98] investors who are able to adjust their portfolios to increase the level of risk can return themselves to their pre-tax level of risk and expected return. Investors who cannot adjust their portfolio positions will still have the marginal cost of bearing risk reduced along with the marginal return. In both cases, from a purely consequentialist perspective it is hard to see the argument that an income tax unfairly overtaxes risky investors by ignoring the costs associated with risk-taking. Second, a consumption tax would at best account for the disutility of risk-bearing only on an aggregate basis, at the cost of ignoring the significant disparities in ex post well-being among individual winners and losers. Even if one believes the psychic disutility of risk should be accounted for, it is doubtful that the resulting tax burden would come closer to a perfected income tax than our admittedly imperfect income tax.

III. A CONSUMPTION TAX AS AN ENDOWMENTS TAX

A consumption tax has also been defended as fair on the ground that it levies an equal tax burden on taxpayers who have equal wealth ex ante. The defense amounts to an argument for a consumption tax as a form of endowments tax—that is, a tax levied on people in accordance with their *capacity* to generate wealth, as measured by their initial endowments at "the beginning of [their] working years."[99] Such endowments are generally defined to include not only the monetary value of financial and physical assets on hand, but also human capital in the form of skills and time that can be devoted to market pursuits.[100]

The customary defense of an endowments tax is that it embraces the fairest notion of ability to pay, making no distinctions among taxpayers who begin their working years with equal abilities to generate income through a combination of work and savings, but who make different voluntary choices

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98. *See* note 77 *supra.*

99. BLUEPRINTS, *supra* note 5, at 39; *see also* Bradford, *supra* note 5, at 108. For a more explicit statement that the "strong" equity case for a consumption tax rests on its being a method of implementing an endowments tax, see D. BRADFORD, *supra* note 10, at 315; *see also* Mieszkowski, *supra* note 14, at 30-31.

100. *See* BLUEPRINTS, *supra* note 5, at 39; D. BRADFORD, *supra* note 10, at 315.

as to the level and timing of work and savings throughout their lifetimes.[101] As between two current earners, one of whom saves and the other of whom spends, the principle implies that the two, facing the same opportunity to generate income from capital, ought to bear the same tax, regardless of the choices they make. This argument has an obvious kinship to the argument for a consumption tax as a perfected income tax, but is getting at something -quite different: not to show that Saver and Spender *are* equally well off ex post, but to show that they *could have been*.[102] As with the perfected income tax argument, there are two ways to equalize the tax burden: either by taxing both the potential imputed income (equal to the forgone interest) to Spender and the potential explicit income to Saver, or by exempting both. If the aim of taxation is to tax ability to pay as measured by ability to generate an explicit income stream, the former would seem preferable as a matter of theory. But in practice, there is no difference between the two, as the former in effect merely imposes a surtax on wages.

A number of objections have been raised to an endowments tax: It ignores unforeseeable shifts in actual (ex post) earnings that generate windfall gains and losses for savers;[103] it assumes without defense its fundamental premise that fairness *ought* to turn on expectations rather than outcomes;[104] and its underlying rationale is impossible to reconcile with the progressive rate structure advocated by at least some of its proponents.[105] Whatever the ultimate merits of an endowments tax, however, the problem with using an endowments rationale for a consumption tax is that a consumption tax does not effect it. A consumption tax is not a tax on ex ante wage-earning potential; it is a tax on actual (ex post) wages.[106] As has frequently been re-

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101. *See, e.g.,* BLUEPRINTS, *supra* note 5, at 39 (suggesting that to the extent we believe taxes ought to be levied on the basis of 'ability to pay,' initial endowment is a "good measure of ability to pay over a lifetime"); D. BRADFORD, *supra* note 10, at 315 ("Ideally, I think of the object of a good tax system as placing a relatively heavy burden not on those who make certain choices from their opportunities, but on those who have relatively good options for choice, that is, good endowments."); Richard A. Musgrave, *ET, OT and SBT,* 6 J. PUB. ECON. 3, 11-12 (1976).

102. The two arguments converge if one assumes that all failures to maximize explicit income streams from work and savings reflect deliberate (rational) choices to trade off work for leisure and interest for current consumption. For by definition, individuals rationally choosing leisure or consumption are as well off (measured by total psychic satisfaction) as they would have been had they opted to maximize explicit wealth. *See* D. BRADFORD, *supra* note 10, at 163. But the argument for an endowments tax per se is animated by a concern that people be taxed in accordance with their potential to generate income. *See, e.g., id.* As such, the argument does not depend upon the vitality of the (heroic) assumption that people who face the same choices ex ante will always end up with the same overall wealth ex post, realized in different forms.

103. *See* E. Cary Brown, *Comments, in* WHAT SHOULD BE TAXED: INCOME OR EXPENDITURE?, *supra* note 3, at 114.

104. Alvin C. Warren Jr., *Comments, in* WHAT SHOULD BE TAXED: INCOME OR EXPENDITURE?, *supra* note 3, at 121.

105. *See id.* at 121-22.

106. *See, e.g.,* BLUEPRINTS, *supra* note 5, at 38-40; Mieszkowski, *supra* note 14, at 30 (defining "a person's endowment, or basic wealth, as the present value or discounted stream of future wage payments"); Andrews, *Fairness and the Personal Income Tax: A Reply to Professor Warren, supra* note 14, at 955-56 (describing a "consumption tax with flat, fixed rates [as] the mathematical equivalent of a one-time, lump-sum tax on wealth, wealth being defined to include the present discounted value of all future [actual] earnings as well as material wealth"). For a redefinition of an

marked, there are powerful and ultimately conclusive reasons *not* to tax
earnings potential, including the difficulty of measuring it and our collective
(libertarian) distaste for indirectly compelling individuals to use their talents
in the most lucrative fashion available to them by taxing them as if they
had.[107] But given that a consumption tax (like an income tax) abandons an
endowment measure of taxable wealth entirely with respect to *human* capi-
tal, it is far from obvious what justification there is for reverting to such a
measure only with respect to income from financial capital. Indeed, it is
hard to see any fairness rationale at all for the hybrid approach that re-
sults—taxing ex post (actual) wage income and ex ante (potential) income
from savings.

IV. A CONSUMPTION TAX AS A WAY TO PRESERVE THE RELATIVE POSITIONS OF SAVERS AND SPENDERS IN A NO-TAX WORLD

Finally, a consumption tax has been defended as fairer than an income
tax on the ground that a consumption tax does not alter the relative values of
present and future consumption, and hence the relative well-being of spend-
ers and savers, in a no-tax world. The argument is the most obvious lesson
to be drawn from the tale of two taxpayers (Profligate and Thrifty) that
opened this article—indeed, it merely restates the mathematical conclusion
of that tale.[108] It is also the one most frequently offered in defense of a
consumption tax.[109] At the same time, the argument is the most difficult to
interpret, as it is usually treated as self-evident by its proponents, and hence
offered up without any elaboration. As a result, one can only surmise what
theory of fairness underlies this assertion.

The argument that savers and spenders are entitled to preserve their rela-
tive positions in a no-tax world is obviously closely linked to the argument in
Part II for a consumption tax as a perfected income tax. For at least some of
its proponents, it may be simply a different way of putting the same point.
That is, the *reason* it is wrong to distort the relative positions of savers and
spenders in the no-tax world is that the positions were *identical* in terms of

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"endowments" tax explicitly to measure the "capacity of each person to *spend* over his or her life-
time"—that is, as a consumption tax, with gifts and bequests included in the tax base—see Henry J.
Aaron & Harvey Galper, *Reforming the Tax System, in* ECONOMIC CHOICES 1984, at 87, 102 n.13
(Alice M. Rivlin ed., 1984) (emphasis added). By disavowing any intention to account for earning
capacity, such a redefinition obviously avoids the charge that the resulting tax base fails to do so.
But this reformulation clearly changes the meaning of endowments in the process, from earning
capacity to spending capacity *given* explicit wage earnings, gifts, and bequests.

107. *E.g.,* Kelman, *supra* note 25, at 654 n.20; Warren, *supra* note 7, at 1114-15.

108. *See* note 9 *supra* and accompanying text.

109. *See, e.g.,* I. FISHER, THE NATURE OF CAPITAL AND INCOME, *supra* note 9, at 253 (noting
that a Fisherian "income tax"—which is to say, a consumption tax—"would not disturb the com-
parative merits of [the] different income streams" resulting from different savings patterns); N.
KALDOR, *supra* note 5, at 81-87; *id.* at 87 (arguing that the real problem with an income tax is that it
reduces the " 'economic reward for waiting' " relative to present consumption, by "disturb[ing] the
relationship of prices between present goods and future goods, in favour of present goods"); A.C.
PIGOU, THE ECONOMICS OF WELFARE 671-72 (2d ed. 1924); Andrews, *supra* note 5, at 1167-69; *see
also* Warren, *supra* note 12, at 946 (lauding this feature of a consumption tax, although ultimately
concluding it may be outweighed by the equity arguments for mitigating lifetime wealth disparities).

well-being. But the argument by its terms applies whether or not savers and spenders as a class are in equivalent ex post positions in the no-tax world. Moreover, it appears to be getting at something quite different. The perfected income tax argument is concerned with the theoretical justification for imposing an income tax in the first place. Focusing on the paradigm case of the marginal saver in a no-tax world, it concludes that it is unfair to tax her as if interest payments had left her wealthier than the marginal spender when, in fact, they merely compensate for her equal, offsetting costs. The argument here, on the other hand, seems to be concerned with the *effects* of an income tax on the relative positions of savers and spenders. As I will suggest, the argument, although not explicit on this point, must therefore have in mind the case of everyone *but* the marginal saver—the one person who by definition will not be disadvantaged by the tax—asserting that the effect of a tax on interest is to reduce unfairly the aggregate and individual welfare of inframarginal savers relative to spenders.

The argument raises two sets of questions: whether savers are in fact disadvantaged relative to spenders; and if so, why that should be thought unfair. Each will be considered in turn.

A. *Are Savers Disadvantaged Relative to Spenders by an Income Tax?*

As discussed above, the claim that savers are disadvantaged by an income tax is at best debatable with respect to a tax on risk. Under a plausible set of assumptions, any investor in risky assets—marginal or otherwise—can restore the same level of surplus she enjoyed in the no-tax world simply by increasing the level of pre-tax risk in her portfolio of investments.[110]

With respect to a tax on the real, riskless rate of interest, the claim is also more problematic than generally thought. The common intuition that savers *are* disadvantaged by an income tax can be illustrated by the following example. Consider four taxpayers (*A*, *B*, *C*, and *D*), who have personal discount rates for saving of 3 percent, 8 percent, 9 percent, and 10 percent, respectively.[111] Assume a zero rate of inflation, and an equilibrium interest rate of 10 percent in a no-tax world. Assume further that after imposition of a 33 percent tax on interest, the nominal equilibrium interest rate shifts to 12 percent, yielding an 8 percent after-tax return.[112] In the no-tax world, *A*, *B*,

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110. *See* notes 74-78 *supra* and accompanying text.

111. As in Part II, for ease of exposition, the example focuses on inframarginal *savers* rather than inframarginal *savings*. However, under most hypotheses of savings behavior, every saver will continue to save until the cost of the last dollar saved exactly equals the marginal return—that is, until they are marginal savers. *See* note 24 *supra*. Thus, it should be understood throughout the discussion that *A*, *B*, *C*, and *D* represent a unit of savings rather than a particular saver, and that the surplus at issue accrues to "inframarginal dollars saved" rather than "inframarginal savers."

112. The precise rise in the nominal interest rate after the imposition of a tax on interest will depend upon the elasticity of the savings supply at the old equilibrium interest rate. The more price-inelastic the supply, the greater will be the portion of the tax borne by savers, rather than passed through to borrowers in the form of an increase in the nominal (pre-tax) interest rate. Unless supply is completely price-inelastic over the relevant quantity range, some portion of the tax will be passed through to borrowers. Although *which* of the above savers in a no-tax world (*A*, *B*, *C*, or *D*) will become spenders once a tax is imposed obviously depends on the real after-tax rate of interest, the

C, and *D* will all choose to save. In the after-tax world, *A* and *B* remain savers, but *C* and *D* will choose to spend currently. Represented graphically in Figure 1 below, the before- and after-tax positions are as follows:

Figure 1

Tax borne by savers   deadweight loss to savers
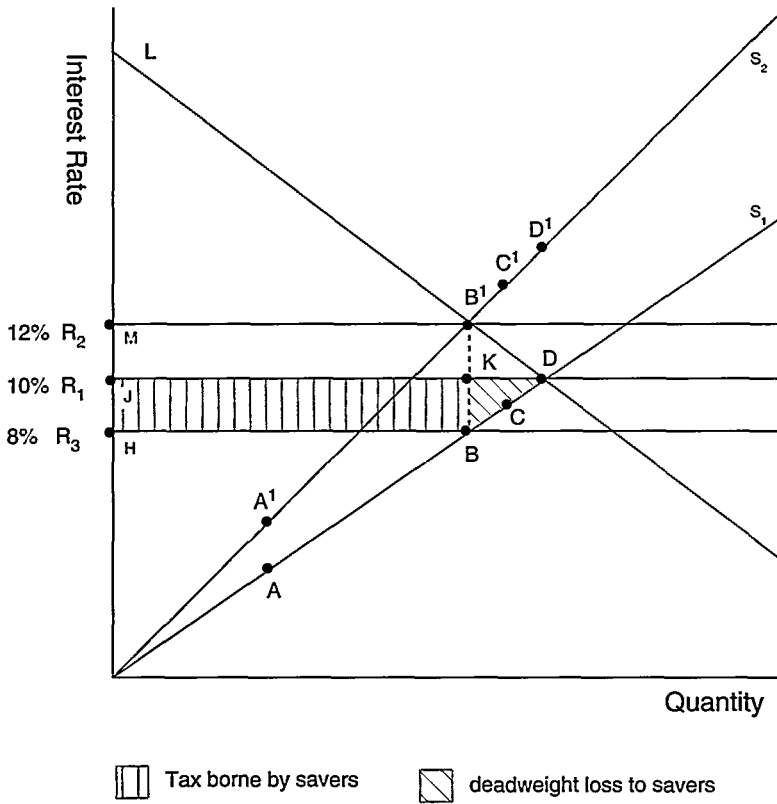
Line *S1* represents the supply curve in the no-tax world, *S2* represents the supply curve after imposition of a tax, and *L* represents the demand curve. *R1* represents the resulting equilibrium interest rate of 10 percent in a no-tax world, *R2* the pre-tax equilibrium interest rate of 12 percent in the after-tax world, and *R3* the after-tax interest rate of 8 percent.

If the fairness concern is solely with the effect of the tax on taxpayer welfare, it appears that marginal saver *D*—the focus of concern in Part II—is the one saver in a no-tax world who will *not* be disadvantaged in any respect by the imposition of an income tax on savings, as *D* is by definition indifferent between saving at a 10 percent interest rate (her choice in a no-tax world) and currently consuming (the choice to which she is pushed by the

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analysis that follows does not fundamentally change whatever degree of elasticity is assumed. The analysis may, however, be fundamentally changed if one assumes that interest paid on consumer debt should be deductible to borrowers. *See* notes 114-116 *infra* and accompanying text.

imposition of a tax). The fairness problem, if any, lies with the effect of the tax on *A, B,* and *C.*

With respect to *A* and *B*—savers before and after imposition of the tax— the argument that a tax on savings decreases welfare is straightforward. In a no-tax world, *A* and *B* enjoyed a suppliers' surplus equal to $7 and $2, re- spectively, for every $100 saved. After imposition of a tax, *A*'s surplus is reduced to $5 (after-tax interest of $8, minus a discount rate of $3) and *B*'s surplus is reduced to zero (after-tax interest of $8 minus a personal discount rate of $8). In the case of *C*—an inframarginal saver before imposition of the tax, who becomes an inframarginal spender after the tax is imposed—the effect of the tax is to deprive him of an opportunity to derive the 1 percent surplus he enjoyed from saving rather than spending in a no-tax world. The total surplus lost by savers is represented by the area bounded by *H, J, B,* and *D.*[113] This lost surplus is, presumably, the focus of concern for con- sumption tax proponents.

There are two difficulties with the above analysis. First, it ignores the treatment of consumer interest on the borrowers' side. If consumer interest is deductible under an income tax and borrowers and lenders (savers) are in the same tax bracket, then the cost to lenders from the tax will be exactly offset by the benefit of the tax deduction to borrowers. As a result, the entire tax will be passed through to borrowers in the form of a grossed-up pre-tax interest rate, leaving the after-tax interest rate unchanged from what it was in a no-tax world.[114] If borrowers and lenders are in different tax brackets, the most likely reason would be that low-bracket and tax-exempt taxpayers gravitate to the role of lenders and high-bracket taxpayers to the role of borrowers. If so, lenders (savers) as a group will actually be *better* off under an income tax than in a no-tax world, to the extent they share in the joint tax gain generated by arbitraging tax rates.[115] Thus, the claim that savers will be made worse off by an income tax depends on the implicit assumption that interest paid for consumer borrowing will *not* be deductible. That assump- tion is at the very least controversial,[116] and (as a historical matter) some-

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113. Of that total area, the triangle *BDK* represents the deadweight loss imposed by the tax, and rectangle *HJKB,* the portion of the tax revenues generated by a tax on savings that is borne by savers. The remaining tax revenues (rectangle *JKMB'*) represent the portion of the tax borne by the borrowers through an increase in the cost of borrowing. Note that the resulting rectangle *MB'BH* shows only the revenue generated by a tax on interest paid to savers, ignoring any possible offsetting revenue loss in the event that consumer interest paid is deductible by borrowers. For further consid- eration of the treatment of borrowers, see notes 114-116 *infra* and accompanying text.

114. Thus, in the above example, one would expect a flat tax rate of 33% to result in a pre-tax interest rate of 15%, yielding an effective after-tax rate of 10% to both borrowers and lenders (that is, the same as in a no-tax world).

115. Thus, in the above example, if one assumed interest was effectively deductible at the 50% tax bracket and taxed at the 33% bracket, then borrowers who would pay 10% in a no-tax world would pay up to 20% (pre-tax) in the tax world; savers who would lend at 10% would demand 15% (pre-tax) to lend the same amounts. One would expect the pre-tax equilibrium interest rate to settle between 15% and 20%, leaving both savers and borrowers better off after-tax than they were in a no- tax world, and the government correspondingly worse off.

116. The customary argument *against* allowing a deduction for personal interest is that the decision to accelerate consumption by borrowing is itself a consumption decision that (like other acts

what surprising given that prior to the Tax Reform Act of 1986 all consumer interest was in fact deductible.

Second, assuming that some portion of the tax on interest *is* ultimately borne by savers, the example proves only that savers are absolutely worse off under an income tax than in the no-tax world. But the charge by consumption tax proponents is not that savers are made absolutely worse off by an income tax. It is that they are made worse off relative to nonsavers. Whether that claim is true depends upon which group of nonsavers the inframarginal savers are compared to. For reasons that are not entirely clear, debate has generally focused on the comparison of savers to nonborrowing spenders, that is, those individuals who in a no-tax world finance current consumption out of past or current earnings. That limitation would make sense if the sole fairness concern with an income tax were that it alters the relative value of the choices to save or spend a *current* endowment. But most consumption tax advocates have argued more generally that a tax ought not to alter the relative values of intertemporal consumption decisions, whenever endowments are actually earned. That is to say, an ideal tax should distort neither the choice to defer consumption nor the choice to accelerate it.[117] If one accepts that premise, then there are *four* groups of taxpayers, not two, whose welfare is relevant in assessing the fairness of a tax on savings: early earners who defer consumption by saving (group 1); early earners who consume currently (group 2); late earners who accelerate con-

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of consumption) ought not to be deductible. While the argument has a surface plausibility, it is difficult to reconcile with our decision under an income tax to tax interest paid to savers for deferring consumption. As suggested at length in Part II, the decision to tax savers rests on the determination that for tax purposes consumption will be treated as not having a time value—that is, that deferred consumption generates no less utility for savers than equivalent nominal amounts of present consumption. Hence, the interest they receive for trading present for future consumption reflects a real increase in wealth. But if so, it should be equally true that *accelerated* consumption generates no greater utility to borrowers than would deferred consumption financed out of later earnings, and hence in decreasing their nominal consumption by the amount of interest paid on consumer loans, borrowers are reducing their real wealth as well. To be consistent, therefore, consumer interest should be deductible under the income tax. For arguments to that effect, see William D. Andrews, *Personal Deductions in an Ideal Income Tax,* 86 HARV. L. REV. 309, 376 n.116 (1972); Alan Gunn, *The Income Tax, the Consumption Tax and the Deductibility of Interest on Personal Debt, in* THE QUEST FOR TAX REFORM 167 (W. Neil Brooks ed., 1988).

117. *See, e.g.,* BLUEPRINTS, *supra* note 5, at 42; N. KALDOR, *supra* note 5, at 84-86; Andrews, *supra* note 5, at 1167-68; Andrews, *Fairness and the Personal Income Tax: A Reply to Professor Warren, supra* note 14, at 947-53. Andrews argues that a fair tax would not alter the relative positions of "equal consumers" in a no-tax world—that is, individuals who consume the same amounts at the same time, irrespective of the pattern of wage earnings and savings that go to finance that consumption. Andrews illustrates his argument by reference to *late* consumption, financed by deferred or current earnings. He posits two taxpayers who consume $800 in year 25. One finances that consumption by investing $100 of current earnings in year 1, which at 9% interest by year 25 has compounded to $800; the other finances it by $800 of current earnings in year 25. Andrews, *Fairness and the Personal Income Tax: A Reply to Professor Warren, supra* note 14, at 948 n.3. A fair tax, Andrews argues, would leave both taxpayers in the same relative after-tax position irrespective of their earnings patterns. *Id.* at 949. Presumably the same logic would apply to taxpayers with equal *early* consumption, financed for one by current earnings and for the other by a loan against future earnings. This logic would require, however, that an income tax not affect the relative values of financing present consumption either out of present earnings or by borrowing against future earnings.

sumption by borrowing (group 3); and late earners who defer consumption until earnings are received (group 4).[118]

As with savers, the effect of an income tax on the above-described groups is less clear cut than generally thought. For spenders who are forced to finance current consumption by borrowing against future earnings (group 3), a tax on interest will change the utility of current consumption if it changes the cost of borrowing from what it was in a no-tax world. As noted above, whether it *would* change the cost of borrowing, and in what direction, depends on the elasticity of supply and demand, and, more importantly, on whether consumer interest is deductible. If it is deductible, borrowers will be at worst in the same position under an income tax as in the no-tax world, and they may well be better off. If consumer interest is not deductible (the general treatment in our current tax structure),[119] borrowers will be worse off than they were in a no-tax world, assuming some portion of the tax is passed through to them in the form of a higher pre-tax borrowing rate. Consider, for example, taxpayer *F*, with a private discount rate for borrowing of 14 percent. *F*, who could have borrowed funds to finance current consumption at 10 percent interest in the no-tax world, will pay 12 percent after imposition of a tax if interest is nondeductible, and 8 percent if it is deductible. *F* will borrow before and after imposition of a tax on savings, whether interest is deductible or not. But, if interest is nondeductible, *F*'s surplus from borrowing will be reduced from 4 percent to 2 percent by imposition of a tax; if interest is deductible, *F*'s surplus will be increased from 4 percent to 6 percent.

For nonborrowing spenders (group 2), a tax on savings should have no effect on welfare.[120] Consider taxpayer *E*, with discretionary income to consume or save, and with a private discount rate for saving of 15 percent. Since *E*'s discount rate exceeds the effective interest rate before and after imposition of a tax, *E* will spend the same amount of money on the same

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118. If individuals' discount rates for lending and borrowing are identical, and lending and borrowing rates are identical, virtually everyone will be either a lender or a borrower—that is, everyone will fall within group 1 or 3. For example, in a world with a lending and borrowing rate of 10%, an individual with an initial private discount rate of 15% (that is, one who demands 15% interest to save $1 of current earnings) would consume all current income as per group 2, generating inframarginal surplus from consumption, until her discount rate for an additional dollar of consumption dropped below 10%, and then would save the balance (as per group 1); or, if her discount rate was still above 10% at the last dollar of current income consumed, would then borrow additional funds (as per group 3) until her marginal discount rate fell to 10%. Only if the last dollar of current earnings brought her marginal time preference exactly to 10% would she neither borrow nor lend. For a description assuming that all individuals are in fact either lenders (if their initial private discount rate is lower than the market rate) *or* borrowers (if it is higher), with members of each group lending or borrowing until their marginal rates of time preference are equal to the market rate of interest, see I. FISHER, *supra* note 26, at 104-06, 117-19. Of course, if individuals had a higher discount rate for saving than for borrowing (as seems likely to be the case), they could be inframarginal with respect to the decision to consume their entire current earnings, and yet choose *not* to borrow at all.

119. The only exception is home mortgage interest, which is deductible under I.R.C. § 163(h) (1988).

120. This assumes that under a general equilibrium analysis a tax on savings will not alter the cost of consumption goods.

amount of consumption goods in both a no-tax and a tax world, deriving whatever pleasure their consumption affords. It is true that a change in the effective interest rate paid to lenders or charged to borrowers in some sense alters E's opportunity sets. Using the above numbers, for example, the effect of the tax on interest is to lower E's opportunity cost of not saving from 10 percent to 8 percent. If the tax also changes the effective cost of borrowing, it will by definition also change the cost E avoids by not borrowing to finance current spending. But as E would not have opted to save or borrow under either rate, it is hard to see how the change in costs or benefits associated with those counterfactual choices affects E's actual welfare.

Finally, for future earners who opt not to accelerate consumption by borrowing (group 4), as for current earners who opt not to save (group 2), a tax on savings should have no effect on welfare. Consider a taxpayer, G, with expected future earnings he could borrow against, and a personal discount rate for borrowing of 6 percent. Since G's discount rate is lower than the interest rate for borrowing both before and after imposition of a tax (whether interest is deductible or not), both in a no-tax and a tax world G will defer consumption of earnings until they are actually earned. While G's opportunity sets are (like E's) in some sense altered by the change in interest rates in the tax world, since G would not opt to borrow or lend in either world, that change will not affect G's actual welfare.

Given the above, if the asserted unfairness of a tax on savings rests on the more general claim that such a tax distorts the values of intertemporal choices, then the claim is obviously true, assuming consumer interest is not deductible. For current earners deciding whether to defer consumption (groups 1 and 2), if any portion of a tax on interest is borne by savers, then savers' welfare will be reduced, while nonborrowing spenders' welfare remains unchanged. For future earners deciding whether to accelerate consumption (groups 3 and 4), if any portion of the tax is passed through to borrowers in the form of a higher pre-tax interest rate, then borrowers' welfare will be reduced, while nonborrowers' welfare remains unchanged.

If the charge of unfairness of a tax on savings focuses instead on the relative disadvantage suffered by savers per se, then the accuracy of the charge depends on which group savers are compared to. If they are compared to current earners/current spenders (group 2) or late earners/late spenders (group 4), the claim is obviously correct. Savers' welfare is reduced by the tax, while the other two groups' welfare remains unchanged. If, on the other hand, savers are compared to borrowers (group 3), then under a plausible set of empirical and legal assumptions (that is, that at least a portion of the tax is passed through to borrowers through an increase in interest rates, and that interest is nondeductible), borrowers could be disadvantaged as much as or even more than savers. If so, the fairness argument would seem to collapse entirely.

Which of these comparisons is relevant depends on what consumption tax advocates take to be ethically significant about savers as a class, a ques-

tion commentators have failed to address thus far. Assume, for example, that what is ethically significant about savers is that they are compelled to enter a market transaction to shift consumption to a different time period than earnings to reach the desired consumption stream. If consumption tax advocates are chiefly concerned that savers not be disadvantaged relative to *other* groups who are compelled to shift consumption, the relevant comparison might be to group 3 (borrowers). As noted above, savers are not necessarily disadvantaged relative to that group.[121] If instead consumption tax advocates are chiefly concerned that savers not be disadvantaged relative to groups whose desired consumption patterns in a no-tax world coincide with their earnings stream, the relevant comparison is to group 2 (current earners who do not save) and group 4 (future earners who do not borrow).[122] Savers are disadvantaged relative to both of these groups. If, on the other hand, what is ethically significant about savers as a class is that they are willing to shift consumption to a *later* period than earnings, thereby adding to the national savings rate, the relevant comparison would be to groups 2, 3, and 4, none of which defers consumption past earnings, and most particularly to group 3, whose members dissave.[123]

The larger point of the above discussion, obviously, is that the premise on which this argument for a consumption tax rests—that savers *are* disadvantaged relative to spenders by an income tax—is in doubt. It depends on unarticulated assumptions, both factual and normative, that may not be true or widely shared.

B. *Why Are Savers Entitled to Maintain Their Relative Pre-tax Position?*

Assuming that consumption tax advocates intend a comparison for which it *is* true that a tax on savings disproportionately hurts inframarginal savers, the question is, so what? A tax that reduces the welfare of inframarginal savers relative to nonsavers is unfair only if savers and nonsavers have an entitlement to the relative levels of well-being they would have enjoyed in a no-tax world. Consumption tax advocates have never explained the rationale behind such an entitlement, and it is unclear on what theory of distributive justice it would be based. One can deduce such an entitlement from the premise that the appropriate measure of ability to pay is consumption and not income.[124] But this tautology just returns us to the

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121. *Blueprints* implicitly adopts as relevant the comparison of savers to borrowing spenders (group 3), but concludes erroneously, or at the very least too hastily, that an income tax disadvantages the former relative to the latter. *See* BLUEPRINTS, *supra* note 5, at 42 (noting that "the income tax makes early earners and later consumers worse off than late earners and early consumers," and that "[a] consumption tax is neutral between these two patterns").

122. Andrews, for example, argues that the most significant comparison is to group 4. *See* Andrews, *Fairness and the Personal Income Tax: A Reply to Professor Warren, supra* note 14, at 949-50.

123. *See, e.g.,* N. KALDOR, *supra* note 5, at 86 (noting, on the assumption that interest is deductible to borrowers, that an income tax "affords a special incentive to ante-date consumption in time").

124. *See* Edwin Cannan, Book Review, 31 ECON. J. 206, 213 (1921) (reviewing A.C. PIGOU,

Hobbesian foundational argument. The question is, is there some independent normative defense of the entitlement? Two general possibilities suggest themselves, tracking the contemporary debate on distributive justice: The entitlement to one's no-tax level of well-being either is grounded in a notion of historical entitlement, or is derived from some end-state theory of distributive justice. While a full consideration of either claim is beyond the scope of this article, a few preliminary observations may suggest the difficulties each entails, and may caution against any facile assumption that such an entitlement should be presumed to exist here. For simplicity's sake, the discussion that follows will focus on the claims of savers relative to current earners/current spenders, that is, on groups 1 and 2. Analogous arguments, however, could be made with respect to the other possible comparisons, and would raise similar difficulties.

1. *Do inframarginal savers have a historical entitlement to surplus value?*

First, the argument might be based on what would be described in the contemporary debate about distributive justice as a historical theory of entitlement—that is, on the principle that the distribution of wealth is justified by the justice of the process that brings it about.[125] The strongest version of historical entitlement theory, which would claim for inframarginal savers an entitlement to retain the absolute level of benefits that the market rate of interest in a no-tax world provides them, faces several serious difficulties. First, the government already influences the level of welfare associated with virtually every choice through a variety of nontax policies, and interest rates are no exception.[126] When the government acts to increase the money supply, for example, thereby driving down pre-tax interest rates, or when it acts

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THE ECONOMICS OF WELFARE (1920)) (sharply criticizing Pigou for resting on precisely this circularity in charging that the income tax discriminates against saving relative to spending).

125. For a discussion of historical theories of entitlement, contrasting them with end-state theories, see ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA 150-60 (1974). Nozick's principle of "justice in holdings" is the most notable recent example of an historical theory of entitlement. *See id.* In contrast, classical utilitarianism, the Rawlsian difference principle, and radical egalitarianism all represent different forms of end-state, or patterned, theories of just distribution, in which the distribution of assets is justified by its correspondence with some structural principle of distributive justice.

126. *See* Bankman & Griffith, *supra* note 29 (manuscript at 11) (noting, inter alia, that funds for interstate highways rather than mass transit increase the consumer surplus of rural taxpayers who rely on automobile travel relative to urban taxpayers who rely on mass transit). C.W. Guillebaud made a related observation with respect to interest:

> [T]he State, through the exercise of its general function as a co-operating factor in the productive organisation of the community, and through the expenditure of the revenue which it receives from the taxpayers, will increase the productivity of the capital accumulated by the action of savers above what it would have been in the absence of the State.
> The State is accordingly entitled to a share in this additional income.

Guillebaud, *supra* note 7, at 489. For a more general critique along the same lines, see Louis Kaplow, *Horizontal Equity: Measures in Search of a Principle,* 42 NAT'L TAX J. 139, 146 (1989) (noting that those who construe horizontal equity to require that we judge tax reform by the degree to which it modifies pre-reform distribution of income have the obligation to show "why the status quo is to be intrinsically valued, thus supporting a preference against all changes in position, when the status quo was itself the product of countless changes throughout history").

to stimulate demand for loanable funds, thereby driving these rates up, it alters the welfare of inframarginal savers. Strict libertarians, who acknowledge the essential similarity between taxation and other forms of government regulation, have concluded that the government ought not to interfere with market-based distribution in *either* form. But for those who stop short of that radical laissez-faire conclusion, the obvious moral to be drawn is the opposite one: If one form of government intervention in the workings of the market does not violate private entitlements, why should the other?

Moreover, even if it were possible to isolate a 'natural' equilibrium rate of interest in a no-tax world, it is unclear on what theory of distributive justice inframarginal savers would have a right to whatever absolute benefit that rate may yield. Such a right cannot be reconciled with the principles of an income tax. Under a conventional income tax, which measures accretions to wealth by the changes in the *market value* of a taxpayer's net wealth, ignoring the psychic cost of deferral entirely, a tax levied on the full amount of real interest is entirely appropriate. Even under a perfected income tax that gives savers a tax basis in the psychological cost of deferral, the surplus hypothetically enjoyed by inframarginal savers over their marginal counterparts (resulting from the relatively lower psychological cost that inframarginal savers incur) ought, on fairness grounds, to be treated as a taxable gain.[127] While it is true that a tax on interest is levied not on the inframarginal surplus per se, but instead on the entire return, the fact that the *effect* of the tax on savers is simply to reduce or eliminate inframarginal surplus makes it possible to defend an income tax as a plausible, though imperfect, means of taxing the surplus itself.[128]

It is equally hard to deduce the right to a saver's surplus from any more fundamental notion of historical entitlement that would call into question the fairness of the income tax altogether. Traditional (Lockean) liberal political theory, which grounds private ownership of property on the sacrifice entailed in its creation,[129] might be construed to entitle savers to the portion of the return that compensates them for the pain of abstinence.[130] But it is hard to see how this entitlement would extend to the surplus that inframarginal savers enjoy over their marginal counterparts, a surplus which

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127. *See* notes 57-58 *supra* and accompanying text.

128. An income tax is imperfect because the amount of the tax is invariant with the level of surplus. Thus, in the above example, *C*, who ceases to be a saver at all, and *B*, who becomes the new marginal saver, are effectively deprived of 100% of their surplus. *A*, who remains inframarginal, is deprived of only two-sevenths of her surplus. It might also seem somewhat peculiar to describe an income tax as a *tax* on surplus, at least with respect to *C*, as the effect of the tax is not to transfer *C*'s surplus value to the state, but rather to eliminate it entirely in the form of a deadweight loss, as *C* shifts from saver to spender.

129. By "Lockean" I mean to denote views generally ascribed to Locke in political debate in the nineteenth and twentieth centuries, not views that Locke himself necessarily would have subscribed to. For the argument that Locke would *not* have endorsed the individualistic view of property rights to which his name is now indelibly attached, see JAMES TULLY, A DISCOURSE ON PROPERTY 98-99 (1980).

130. This assumes (*contra* Davenport) that such pain is regarded as a relevant sacrifice for these purposes. For a discussion of Davenport's criticism of abstinence theory, see notes 35-44 *supra* and accompanying text.

owes itself to the mere fortuity of different preference structures, not to individual effort. While recent libertarian reinterpretations of Lockeanism offered by Robert Nozick and others would extend an absolute entitlement to all surplus value generated by a market exchange, the logic of such an extension is dubious.[131] More to the point, it is not a view any proponent of a consumption tax can subscribe to, given that it would preclude most taxes, including a consumption tax, as a form of theft.

More plausibly, the argument for an historical entitlement may rest on the more modest demands of horizontal equity within an income tax. That is, conceding that the surplus enjoyed by inframarginal *savers* represents an accretion to wealth that the government may justly appropriate, it could nonetheless be argued that horizontal equity requires that we appropriate an equal portion of the surplus of inframarginal *spenders* (resulting from their greater than marginal taste for current consumption) through a tax on the pleasure derived from consumption.[132] Hence, as we are unable or unwilling to do the latter, we should refrain from the former as well.

But there are a number of problems with that argument. First, it is hard to see the normative appeal of maintaining the relative rank ordering of taxpayer wealth—the aim of horizontal equity—absent some belief that the initial rank ordering was itself just.[133] In the case of inframarginal surplus accruing to savers and spenders as a result of differing tastes, it is hard to see the argument that the initial ordering *is* just, for the reasons discussed above.

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131. As applied to interest, Nozick's historical entitlement theory would argue that the inframarginal saver deserves whatever surplus his inframarginal tastes produce, because this surplus is generated by the exchange of something the saver rightly owned (the right to currently consume one's own capital that was acquired by just means) for a price the borrower voluntarily paid. *Cf.* R. NOZICK, *supra* note 125, at 151. For a similar, less developed argument for an entitlement to market-generated surplus, see RICHARD A. EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN 162-66, 334-38 (1985). The difficulty with Nozick's argument is that it assumes the very thing that must be proved: that the right to whatever is produced by one's efforts ought to carry with it the right to any surplus value *above* the sacrifice entailed in producing it.

132. For an explicit argument to that effect, see Martin Feldstein, *On the Theory of Tax Reform,* 6 J. PUB. ECON. 77, 82-83 (1976).

133. It has been suggested that horizontal equity has a rationale distinct from entitlement theory, occupying a middle ground between entitlement and end-state theories like utilitarianism. *See* Mervyn A. King, *An Index of Inequality: With Applications to Horizontal Equity and Social Mobility,* 51 ECONOMETRICA 99, 99-100 (1983). That may be true when horizontal equity is invoked in the specialized sense of proscribing differential treatment of taxpayers on invidious grounds such as race or sex. *See, e.g.,* RICHARD A. MUSGRAVE, THE THEORY OF PUBLIC FINANCE: A STUDY IN PUBLIC ECONOMY 160 (1959); *cf.* Anthony B. Atkinson, *Horizontal Equity and the Distribution of the Tax Burden, in* THE ECONOMICS OF TAXATION 3, 18 (Henry J. Aaron & Michael J. Boskin eds., 1980) (summarizing the views of commentators who consider principles of horizontal equity to be buffers against discrimination). But if one views horizontal equity in the more general and common sense of requiring the preservation of pre-tax rankings among all taxpayers, it is hard to see how an entitlement to maintain those relative rankings could be derived from anything but an initial entitlement to the rankings themselves. This point has been made by a number of economists in the past decade, who argue, in response to the view espoused by Feldstein and others that preservation of the initial (pre-tax) ranking of wealth is per se desirable, that unless the initial ranking is taken to be fair, the principle of horizontal equity has no normative force. *See* Atkinson, *supra,* at 17-18; David M. Gordon, *Taxation of the Poor and the Normative Theory of Tax Incidence,* 62 AM. ECON. REV. 319, 321 (1972); Kaplow, *supra* note 126, at 146-47; King, *supra,* at 100; Robert Plotnick, *The Concept and Measurement of Horizontal Equity,* 17 J. PUB. ECON. 373, 375-76 (1982).

Second, like the horizontal equity argument with respect to *marginal* savers and spenders in Part II above, the argument assumes the matter to be resolved. Horizontal equity requires only that like taxpayers be taxed in like fashion. It leaves open (begs) the question of who is "like" for these purposes. If—as at least some economists have assumed—the relevant measure of likeness is utility,[134] an income tax will obviously discriminate against those with a higher taste for future rather than present consumption, just as an income *or* consumption tax will discriminate against those with a higher taste for consumption than leisure.[135] If instead the relevant measure is assumed to be explicit wealth—the conventional view—then taxing inframarginal savers' surplus (in the form of cash) while ignoring inframarginal spenders' surplus (in the form of greater pleasure derived from current consumption) does not violate horizontal equity. The foregoing is underscored by noting that *any* tax except a head tax reduces the relative consumer surplus associated with the particular activity or attribute being taxed. Thus, as has been noted, a tax on labor will tend to decrease the consumer surplus of work as compared to leisure; a tariff on imported cars tends to reduce the consumer surplus of those who prefer imports to domestic cars.[136] If we believe that this differential effect does not violate horizontal equity, it is because for a variety of practical or philosophical reasons we view workers and nonworkers, Ford owners and Audi owners, as not "similarly situated" for these purposes. That is to say, for all taxes we implicitly accept a tax base considerably narrower than taxpayer welfare. That observation does not preclude the possibility that the utility derived from inframarginal saving and spending decisions ought to be treated as "like." But as suggested in Part II above, it does shift onto consumption tax advocates the burden of explaining why they should be.[137]

Third, even assuming that utility were deemed the appropriate tax base, it is unclear one can compare the utility derived by the class of inframarginal savers to that derived by the class of inframarginal spenders, or by any one saver to any one spender, from their respective decisions whether or not to

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134. *See* Feldstein, *supra* note 132, at 83; Harvey S. Rosen, *An Approach to the Study of Income, Utility, and Horizontal Equity*, 92 Q.J. ECON. 307, 307-08 (1978) (adopting Feldstein's "utility" definition of horizontal equity in preference to the traditional definition "in terms of some observable index of ability to pay such as income, expenditure or wealth"); *see also* King, *supra* note 133, at 101 (arguing that "[h]orizontal equity implies that a tax should leave unchanged the rankings of utility levels"). King leaves open, however, the question of how to define utility, noting that it could be a "function only of income and prices." King, *supra* note 133, at 101.

135. *See* Feldstein, *supra* note 132, at 82-83, 88-89.

136. Bankman & Griffith, *supra* note 29 (manuscript at 11).

137. Guillebaud suggests that savers and spenders might be unlike in their debts to the state, as well as in the form of utility that these individuals derive from their actions:

> [T]he State incurs additional costs and renders additional services to the property-owners, which it does not incur or render in respect of the citizen who is expending his income on consumable goods. It is therefore right that the State should receive a contribution from the property-owner, whose income is safeguarded by the State, to cover these costs and services.

Guillebaud, *supra* note 7, at 488.

defer consumption—a matter to be returned to shortly. If such comparisons are not possible, then devising a horizontally equitable tax is not possible.

2. *Does the distribution of surplus between savers and spenders in a*
   no-tax world correspond to some end-state theory of fairness?

Alternatively, it could be argued that inframarginal savers and spenders have an entitlement to the relative distribution of welfare they would enjoy in a no-tax world, because the distribution itself, whether earned or not, corresponds to some end-state notion of distributive justice. Like the historical entitlement argument, no end-state defense has been offered explicitly in the consumption tax literature. But it is possible that in some inchoate form it underlies at least some people's view that a tax on savings is unfair—for example, in a general sense that the distribution of welfare between savers and spenders in a no-tax world is roughly equal, and that a tax on savings moves it (undesirably) in the direction of inequality.

Any end-state defense of a consumption tax poses a number of difficulties—indeed, so many difficulties that it may not be worth taking the defense seriously enough to work them through. The first problem is defining what universe of decisions we are comparing. It makes no sense to compare the aggregate utility derived from all savings to that derived from all current consumption. The vast majority of earnings even for high savers are consumed currently rather than saved. Therefore, aggregate utility derived from consumption will be much higher than that derived from savings. Instead, one would have to compare the utility of savings only to that portion of current consumption that realistically represents savings forgone—that is, the portion of discretionary income that could have been saved but was not. How precisely that portion would be defined for each taxpayer, however, is not obvious.

The second difficulty lies in agreeing on a definition of fairness. If we are concerned solely with the fairness of the end-state distribution of welfare, it is hard to see the rationale for considering the utility generated by the act of saving or spending in isolation, rather than as one component of the overall welfare of savers and spenders as a class. In the latter case, the fair distribution of surplus from decisions concerning the timing of consumption would presumably be dictated by one's more general notions of distributive justice. Proponents of an egalitarian redistribution of wealth on utilitarian or Rawlsian grounds, for example, would presumably regard a tax on interest that reduces savers' welfare as a step in the right direction if inframarginal savings are held disproportionately by the wealthy, and as a step in the wrong direction if they are held disproportionately by the poor. The point, obviously, is that whatever one's vision of distributive justice, one cannot assess the merits of any given distribution of surplus from saving and spending decisions except in the larger context of savers' and spenders' aggregate endowments. Moreover, even if one chose to treat the welfare effects of intertemporal consumption decisions in isolation, it is unclear what would

constitute a fair division of the surplus. If one regards the surplus as an unearned windfall to its recipients created by the fortuity of inframarginal tastes, it seems hard to defend as fair any particular distribution of the surplus as between spenders and savers other than equality.

Third, whatever definition of fairness one adopts, whether imposition of a tax represents a move away from, or toward, that ideal is almost certainly unanswerable. There are two problems here: an analytical one and an empirical one. The analytical problem is whether one can devise a common measure for the welfare of spenders and savers that permits one to compare the two. The answer is yes, but only if one assumes interpersonal comparability of utility—more particularly, if one assumes that each individual's reservation price for a commodity provides a uniform measure of the commodity's utility. In that case, the relative levels of welfare enjoyed by savers and spenders will be equal to their relative levels of inframarginal surplus, measured by the difference between their personal discount rates and the market rate of interest. The following logic underlies that assertion. If one starts with the axiomatic assumption that the marginal spender turned marginal saver will derive identical utility from the choice to spend or save, and if one assumes further that *all* marginal savers and spenders derive the same utility from their respective decisions to save or spend (that is, if one presumes the interpersonal comparability of utility as measured by reservation prices), the utility derived by inframarginal savers and spenders will equal the utility of their marginal counterparts *plus* whatever surplus they enjoy by virtue of the lower (in the case of savers) or higher (in the case of spenders) price they put on deferring consumption. Since the first component will be equal for both inframarginal groups, their relative well-being will be determined by the second—that is, by their inframarginal surplus.

But how is inframarginal surplus to be defined for these purposes? Surplus (whether consumers' or savers') does not measure the absolute welfare associated with a given choice. It measures the increase in welfare generated by that choice over other competing choices (or, in more conventional economic terms, the gains from trade from any given starting position). For inframarginal *savers*, the definition of surplus—equal to the interest rate they were paid minus their personal discount rate—thus reflects the increase in welfare generated by the choice to trade off current for future (increased) consumption.[138] This suggests that the surplus enjoyed by inframarginal *spenders* should be defined as the converse: that is, as the increase in welfare generated by trading off future (increased) consumption for current consumption. For nonborrowing spenders (group 2), who must choose between consuming existing wealth currently or saving it for future consumption, each decision to consume rather than save generates surplus, in an amount equal to the consumer's personal discount rate for saving (reflecting the psy-

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138. To draw upon an example given above, recall taxpayer *A*, who has a personal discount rate for savings of 3%, and who faces an interest rate to lenders of 10% in the no-tax world and 8% (after-tax) in the tax world. If *A* decides to save rather than spend he acquires a surplus of 7% in the no-tax world and 5% in the tax world.

chological cost of deferring consumption) minus the actual interest rate paid to lenders (reflecting the benefits of savings forgone). Thus, for taxpayer E above, assuming a personal discount rate of 15 percent, and interest rates of 10 percent in a no-tax world and 8 percent (after-tax) in a tax world, the decision to consume currently generates a surplus of 5 percent in the no-tax world and 7 percent in the tax world.[139]
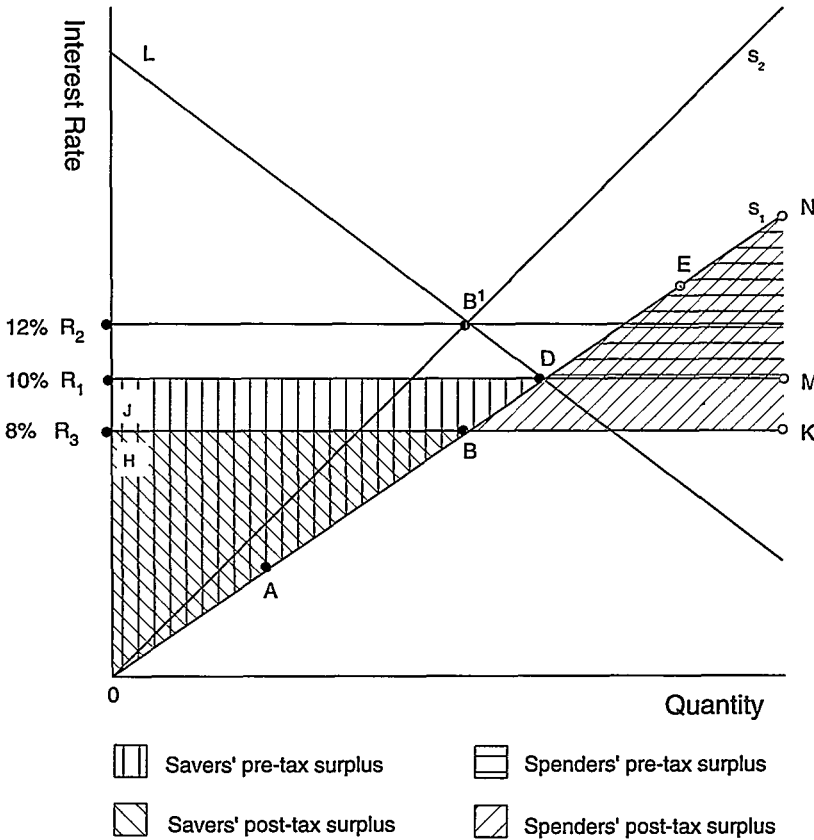
Given the above analysis, the claim that the distribution of welfare between savers (group 1) and spenders (group 2) in a no-tax world is fairer than what results from a tax on savings translates to the claim that the pre-tax inframarginal surplus of savers and spenders, represented in Figure 2 by triangles *ODJ* and *MDN*, respectively, reflects a fairer division of welfare than the after-tax surplus of each group, represented by triangles *OBH* and *KBN*, respectively. This claim depends, however, on the validity of the underlying assumption that the reservation prices attached to commodities *do* provide a common measure of the utility such commodities provide. Economists routinely indulge that assumption in assessing the relative welfare gains and losses of various subsidies and taxes.[140] Fisher and others have likewise indulged it, in assuming that nominal consumption is an acceptable tax base only because it provides a reasonably good proxy for what they took to be the ideal tax base: "real income" in the form of actual pleasure derived from consumption.[141] But the assumption that the utility of a commodity for all purchasers is measured by the price they would pay for it is obviously open to doubt. One would expect the utility of a nominal amount of consumption to vary not only with the wealth of the consumer (the premise behind the conventional assumption of the declining marginal utility of wealth), but also with her absolute capacity to derive pleasure from consumption, whether now or in the future. Clearly, this is simply Davenport's point all over again: Any would-be saver's reservation price for saving (whether marginal or not) merely reflects her relative preference for present versus future consumption. It says nothing about the absolute hedonic content of either choice. In the context of a perfected income tax, it was suggested above, there is a rejoinder to Davenport: that the trade will still be an even one, since the value of what the marginal saver/spender gets is by defi-

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139. While a tax on savings increases spenders' *surplus*, it has no effect on spenders' welfare. *See* note 120 *supra* and accompanying text. That apparent inconsistency is explained by the fact that surplus measures the *relative* advantage gained by one choice over another, not the absolute utility such a choice generates. Thus, when saving is made absolutely less attractive by a tax, the *relative* advantage of spending rather than saving increases, although the absolute pleasure derived from spending remains unchanged.

140. For a conventional analysis equating welfare gain (or loss) with changes in consumer surplus, see J. STIGLITZ, *supra* note 20, at 259-61, 446-49; R. TRESCH, *supra* note 93, at 64-65. For an application of that analysis to savings decisions, see Strnad, *supra* note 52, at 1092-98. For a defense of the interpersonal comparability of the utility of money that underlies such analyses, see Arnold C. Harberger, *Three Basic Postulates for Applied Welfare Economics: An Interpretive Essay,* 9 J. ECON. LITERATURE 785 (1971).

141. *See* note 93 *supra. But cf.* I. FISHER, THE NATURE OF CAPITAL AND INCOME, *supra* note 9, at 39-40 (noting the common error of believing that "wealth consists of utility," which would make the law of diminishing marginal utility of wealth a contradiction in terms).

Figure 2

| Savers' pre-tax surplus | Spenders' pre-tax surplus |
| Savers' post-tax surplus | Spenders' post-tax surplus |

nition equal to value of what she gave up, even if the absolute utility of either choice is unmeasurable. But that rejoinder is of no help here. For what we care about in this context is precisely whether we can measure the absolute utility generated by saving and consumption decisions.

Even if one takes the *aggregate* surplus of each group, as measured by the supply curve for savings, as a reasonably good approximation of the groups' aggregate relative utilities in the no-tax and tax worlds, there remains an empirical problem in determining whether imposition of a tax reflects a move toward or away from a "fair" distribution. The answer depends on the shape of the supply curve, an empirical question that may be impossible to resolve. If one's goal were equality between the two groups, for example, it is not hard to imagine configurations for a supply curve that would leave the class of savers far better off than the class of spenders in the no-tax world, with a tax on savings therefore possibly representing a move *towards* greater equality.[142]

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142. That would be true if, as is certainly the case, some inframarginal savers actually had a

Finally, the entire analysis above goes only to a fair distribution of utility between the aggregate classes of savers and spenders. The analysis ignores the discrepancies that exist in the utility derived by individual members of each class (for example, as between individuals *A*, *B*, and *C* above). As suggested in Part II, the choice to focus on group rather than individual fairness is unusual in tax law, and seems to require some defense.

3. *Summary.*

Thus, it is unclear what underlies the widespread assumption that inframarginal savers and spenders have a right to maintain their relative pre-tax levels of surplus. Grounding that right in historical theories of entitlement runs into several problems. The goal of maintaining savers' and spenders' relative levels of pre-tax wealth has appeal only if such rankings are themselves just. It is hard to see the argument that they *are* just, given that the pre-tax surplus enjoyed by inframarginal savers and spenders owes nothing to savers' and spenders' own efforts. Instead, that surplus results from the fortuities of the market rate of interest—itself produced in part by government nontax policies—and from savers' and spenders' inframarginal tastes. In addition, savers' surplus is in the form of explicit wealth, while spenders' surplus is in the form of psychic income. Under a conventional income tax, where the tax base is explicit wealth rather than utility, it is entirely appropriate to tax the former surplus and not the latter. Finally, even if the tax base were utility rather than wealth, we can levy an equal tax on equal levels of utility derived by inframarginal savers and spenders only if we can compare their respective levels of utility. Such a comparison may not be possible.

Grounding savers' and spenders' rights to their relative pre-tax well-being in end-state theories of entitlement is even less promising. It is not obvious why the utility generated by surplus from inframarginal saving and spending decisions should be considered in isolation, rather than as merely one component of overall well-being. If such surplus is considered in isolation, it is unclear what distribution would be fair, given that inframarginal surplus is an unearned windfall to its recipients. Finally, determining whether a tax on savings moves savers and spenders closer to the ideal distribution or further away again requires that we be able to compare the utility levels of inframarginal savers and spenders. As noted above, that comparison may not be possible.

In sum, it is difficult to explain the right of inframarginal savers and spenders to maintain their relative pre-tax positions by any conventional theories of distributive justice. Even if such a right can be defended, as argued in part IV.A above, there are significant empirical and normative difficulties in showing that a consumption tax *would* preserve the relative pre-tax posi-

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negative discount rate, most other inframarginal savers had a low discount rate, and the supply curve sloped steeply right below equilibrium price and then flattened out. In such a case, the aggregate surplus of savers as a class could well exceed that of spenders as a class.

tions of savers and spenders. Given both problems, it is perplexing why this argument for the greater fairness of a consumption tax has received widespread deference from commentators on both sides.

V. CONCLUSION

Of the three theories of fairness implicit in the arguments for exempting the return to capital, none makes out a persuasive case for a consumption tax over an income tax. The first, the argument for a consumption tax as a perfected income tax, has a number of serious problems. It requires selective use of a utility-based rather than wealth-based measure of income; it depends on the assumption of rationality in saving and spending decisions; and it ignores inframarginal surplus. Framed with an eye only to the riskless interest rate, it ill fits the equity considerations that are raised by risk premia, the predominant component of capital income. The second fairness claim, the argument for a consumption tax as an endowments tax, embraces a view of a fair tax base, measuring capacity to earn rather than earnings themselves, that is not widely shared by tax theorists. More importantly, it implements that view only with respect to financial capital, reverting to an ex post income tax for wealth generated by human capital. It is hard to defend the resulting hybrid tax system on any ground.

The third fairness claim, the argument that a consumption tax is fair in itself because it preserves the relative status of savers and spenders, although the one most clearly and frequently endorsed by consumption tax proponents, seems the least persuasive, at least in its current underdeveloped state. It is not clear that a tax on income from capital does disadvantage savers relative to spenders. The answer depends in part on the deductibility of consumer interest on the borrowers' side, and in part on the group of spenders to which savers are compared. More importantly, assuming that savers *are* disadvantaged relative to some group of spenders deemed relevant for these purposes, commentators who have supported a consumption tax on this ground have failed to articulate a theory of entitlement that explains why that differential effect is unfair. As suggested above, it is difficult to deduce that entitlement from traditional historical or end-state theories of distributive justice. If proponents have some other explanation for the normative basis of savers' entitlement, it remains to be offered.

This hardly disposes of the case for a consumption tax on fairness grounds. A serious consideration of the (Hobbesian) foundational argument has yet to be undertaken. Moreover, both the Hobbesian argument and the arguments considered above for exempting the returns to capital, whatever their other differences, all share certain fundamental premises about fairness. In particular, all assume that the definition of a fair tax base should be determined independent of other government welfare policies, and all appear to assume that it should be derived from notions of horizontal equity—that is, from the government's obligation to preserve the relative pre-tax rankings of individual wealth, however wealth may be defined for these purposes.

While that individualistic, entitlement-based view of fairness has dominated tax debate at least among noneconomists for the past century, other views of fairness obviously are possible. One could, for example, support a consumption tax on utilitarian (welfarist) grounds, if it could be shown that exempting the return to capital, with redistributive transfers by the government, would maximize aggregate well-being. Under that view, efficiency and incentive considerations would themselves constitute key elements of an equity argument.[143] Alternatively, one could support a consumption tax as a reward for the pure virtue of thrift. More than a hint of such a view is detectable in Hobbes's attack on an income tax as rewarding the "luxurious waste of private men," and punishing those who "laboureth much, and sparing the fruits of [their] labour, consumeth little."[144] One suspects that the retributive view of justice implicit in Hobbes's attack, although rarely articulated in the academic literature, has a fairly strong hold on the popular imagination.[145]

Finally, in this, as many other matters, the ultimate resolution of the fairness debate may depend on which side—income tax or consumption tax proponents—bears the burden of proof. But the evident weakness of fairness arguments that have dominated the tax literature over the past century indicates that consumption tax proponents have not met whatever burden they bear.

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143. While receiving scant attention in the legal tax literature, welfarist arguments for a consumption tax have been prominent in the economics literature. For a summary of the economic literature dealing with the optimal tradeoff between wage and capital taxes, see Bradford, *supra* note 5, at 103-04; A.B. Atkinson & A. Sandmo, *Welfare Implications of the Taxation of Savings,* 90 ECON. J. 529 (1980).

144. T. HOBBES, *supra* note 6, at 267; *see also* R.A. Musgrave, *In Defense of an Income Concept,* 81 HARV. L. REV. 44, 46 (1967) (describing the Hobbesian expenditure tax as "in effect . . . a fine on consumption (the sin of nonaccumulation) with equal taxes being paid by equal sinners").

145. Although closely allied to the argument that a consumption tax creates greater incentives for savings, the retributive justice argument is conceptually distinct. One could obviously support rewarding the virtuous and punishing the sinful as a matter of moral dessert, even if one believed it would have no effect on the choices of future would-be sinners.