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From Each According to Their Ability?

An Analysis of Endowment Taxation and Potential Earnings

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Abstract

This Article examines ability taxation, which is a tax on a person's earning ability or potential earnings, rather than earned income. Despite this regime's longstanding favor as a theoretical ideal for fair and efficient taxation among public finance economists, certain political philosophers, and tax law scholars, insufficient effort has been made to provide an analysis of what 'potential earnings' means. This Article explores competing understandings of this notion, and situates them within a multipart taxonomy. In so doing, it unearths a tension at the core of the ability tax program involving a fundamental misalignment between the metaphysics (or correct conceptual analysis) of potential earnings and the economics of its taxation. It concludes that once we correctly understand its requirements, we should reject ability taxation as the first-best normative ideal it has been held out to be on the grounds that it is overly burdensome and unfair to certain individuals.

Introduction

The tax-and-transfer system is widely regarded as the most important policy instrument for redistributing wealth among the members of a society to create a just allocation of resources. Indeed, some legal economists have gone so far as to argue that, for efficiency reasons, *all* redistribution should generally be effectuated through the use of taxation.[1] But although widespread agreement has been reached on the tax system's importance, there has been no such consensus on the question of what, in practice, should be taxed. Among the usual cast of characters—which include income, consumption, and wealth—none has emerged as a universally agreed-upon front runner by theoreticians.

However, this generalization comes with a significant caveat: among economists, there has long been a good deal of agreement on the '*ideal tax base*'—that is, those aggregate assets or financial streams on which taxation would ideally be imposed, bracketing the various administrative obstacles that could delimit a proposal's practicability in the real world. If certain epistemic limitations involving the observation and measurement of the relevant quantities could be

1. See Louis Kaplow & Steven Shavell, "Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income" (1994) 23:2 J Leg Stud 667 at 667, 677; A Mitchell Polinsky, *An Introduction to Law and Economics*, 2d ed (Little Brown & Co, 1989) at 127.

overcome, these economists claim[2] that a tax on a person's *endowment*, *ability to earn,* or *potential earnings*, rather than on one's actual earnings, would be the most efficient and fair system of taxation. Potential earnings have commonly been understood to refer to the maximum income that a person *could earn*, or *could have earned*, over the relevant period.

Economists have not been alone in heralding the virtues of ability taxation, as political philosophers and tax law scholars have also touted its appeal. Within political philosophy, the topic of redistribution has generated a vast literature under the title of 'distributive justice.' And while—perhaps due to its legal and economic technicalities—relatively little has been written by philosophers on the legal institution of taxation in particular, implicit support for an endowment tax scheme can be culled from the work of several important liberal egalitarian philosophers.[3] These philosophers, like their public finance economist comrades, have regarded it as a first-best ideal, whose effects might only be imperfectly approximated by income, wealth, and consumption taxes, respectively. Numerous legal scholars have also been swayed by the endowment tax's charms,[4] emphasizing its various purported efficient and equitable features.[5]

Despite this significant and growing support for the ability tax as a theoretical ideal, against which we might measure the attractiveness of more administratively feasible or epistemically tractable regimes, there has been insufficient discussion of what 'earning ability' or 'potential earnings' mean, and therefore what the mechanics of an idealized ability tax would look like. In essence, the debate has rushed ahead to consider the regime's merits without fully understanding what the tax even requires, when properly understood. It is the immediate aim of this Article to fill this hole in the law, economics and philosophy literatures, by answering the methodologically prior questions of how 'earning

2. See JA Mirrlees, "An Exploration in the Theory of Optimum Income Taxation" (1971) 38:2 Rev Economic Studies 175 at 175; Louis Kaplow, *The Theory of Taxation and Public Economics* (Princeton University Press, 2008) at 96; Harvey S Rosen & Ted Gayer, *Public Finance*, 9th ed (McGraw-Hill/Irwin, 2010) at 332-34; Anthony B Atkinson & Joseph E Stiglitz, *Lectures on Public Economics* (McGraw-Hill, 1980) at 356-62.

3. See Ronald Dworkin, *Sovereign Virtue: The Theory and Practice of Equality* (Harvard University Press, 2002) at 96 (defending a version of luck egalitarianism, dubbed "equality of resources," where a tax on earning ability is viewed as a first-best normative ideal); GA Cohen, *Rescuing Justice and Equality* (Harvard University Press, 2008) at 68-74, 102-03 (arguing, *contra* Rawls, for a "strict" difference principle, according to which the talented can, as a matter of justice, be expected to use their endowments to maximally benefit the worst-off without being granted inequality-generating income incentives as remuneration, except where doing so would impose particularly severe labor burdens on the talented).

4. See Daniel N Shaviro, "Inequality, Wealth, and Endowment" (2000) 53:3 Tax L Rev 397 (offering numerous consequentialist and fairness-based arguments for endowment taxation); Lawrence Zelenak, "Taxing Endowment" (2006) 55:6 Duke LJ 1145 at 1181 (surveying the endowment tax literature and concluding that gradual steps towards an ability tax are likely justified); Bruce Ackerman & Anne Alstott, *The Stakeholder Society* (Yale University Press, 1999) at 155–77 (endorsing a "privilege tax," based upon a person's parents' income, which could be viewed as a partial endowment tax on socio-economic endowment); Daniel Markovits, "How Much Redistribution Should There Be?" (2003) 112:8 Yale LJ 2291 (employing Dworkin's luck egalitarian framework, which takes a tax on earning ability as a first-best ideal, to explore how much redistribution there should be).

5. These shall be discussed in section I of this Article.

ability' and 'potential earnings' are to be interpreted and appraised. Without answers to these threshold conceptual questions, the debate cannot responsibly proceed further.

As an immediate corollary to this exercise in conceptual analysis, this Article also demonstrates that once we come to understand how earning ability and potential earnings should be understood and valuated, we should reject the ability tax regime as unduly burdensome and unfair to certain citizens. These problems stem from a fundamental disconnect between (i) the metaphysics (or, the correct conceptual analysis of) earning ability and potential earnings, and (ii) the economics of its taxation. Up to this point, no one has taken a thorough look at certain fundamental issues in the construction of an endowment tax; this has perforce been due to antecedent neglect of the conceptual questions of what earning ability and potential income amount to. This Article takes that hard look, and concludes that the endowment tax, at least in its purest forms, cannot survive the heat of scrutiny. My argument therefore constitutes a pressing challenge to the orthodoxy in public finance economics, as well as to the growing cadre of endowment tax partisans among political philosophers and scholars of tax law. The endowment tax, properly understood, cannot serve as the paradigm of fair and efficient taxation that it has been held out to be. There are at least two practical upshots to this analysis.

The first is that attempts to implement an actual endowment tax by using observable proxies for earning ability[6] are likely misguided. In recent years, many such (partial) proxies have been proposed, including scores on mental and physical aptitude tests, parental affluence, education levels, health, financial savings, and the consumption of various 'indicator goods,' which individuals of distinct ability levels tend to consume differentially, *inter alia*. If this Article's arguments are correct, however, then efforts to implement an endowment tax through the use of these proxies would seem to be a fool's errand. For if endowment taxation is found to be unattractive even granting a slew of idealizing epistemic and administrative assumptions, then a quasi-endowment tax, based upon merely imperfect proxies for actual earning ability, could not hope to do better.

The second practical upshot is that the endowment tax should no longer be held out as a theoretical ideal against which we measure the desirability of other more practicable policy proposals. In other words, this Article's arguments militate against the following thought: Even if a true endowment were not practicable, if some other feasible tax regime or policy *X* did a better job of mimicking the effects of a true endowment tax than a competing feasible tax regime or policy *Y*, then this would count as a reason in favor of adopting *X* over *Y*. For instance, it has been suggested that because financial savings are positively correlated with earning ability, an income tax does a better job at approximating an endowment tax than does a consumption tax, since under a consumption tax returns from

6. For a discussion of this approach, see Kaplow, *supra* note 2 at 98-99.

savings are not included in the tax base.[7] If this Article's arguments are sound, however, and a true endowment tax is not theoretically desirable, then this fact should provide no reason to favor an income tax over a consumption tax. The reader should keep these concrete stakes in mind as they proceed through the remainder of the Article.

By way of roadmap, in section I, I briefly survey some of the most common economic and philosophical arguments for and against ability taxation. I then turn in section II to the methodologically prior questions alluded to above: viz., how are earning ability and potential income to be appraised? It is here that I first introduce a number of distinctions between different conceptions of potential earnings, and I also briefly state my primary argument against the ability tax. In section III, these competing interpretations of potential earnings and their accompanying taxational instruments are explored in depth, and I seek to adjudicate between these sundry alternatives by outlining their respective strengths and weaknesses. In the course of doing so, I highlight various policy problems afflicting the implementation of (what I argue are) the most conceptually principled forms of endowment taxation. Finally, in section IV, I conduct a postmortem and retrospectively diagnose the numerous problems encountered in the previous part. Here, I argue that these problems are all manifestations of two deeper tensions central to the endowment tax program. My primary argument against the endowment tax, introduced in section II, is revisited and elaborated upon in light of these findings. In the conclusion, I briefly review the main lessons of the Article.

I. Common Arguments For and Against Ability Taxation

In this section I, I provide a brief overview of some of the main economic and philosophical arguments for (and against) endowment taxation. Because the primary aims of this Article are analytical and argumentative, rather than expositive, this survey shall be quite abbreviated. For a more in-depth survey of the endowment tax literature, the reader is encouraged to consult a prior article of mine on the topic.[8] My purpose here is to provide just enough context to prepare and motivate the analysis in the remaining parts of this Article.

We begin with the *standard economic case*[9] for endowment taxation, which highlights twin attractive features of the tax that are not jointly shared by alternative tax regimes: (i) an efficient incentive structure, and (ii) amenability to progressivity.[10] To illustrate these dual advantages, consider, by way of comparison, an income tax. Because a tax on earned income reduces a person's effective hourly wage, it serves to make leisure "cheaper" relative to the alternative of

7. See Emmanuel Saez, "The desirability of commodity taxation under non-linear income taxation and heterogeneous tastes" (2002) 83:2 J Public Economics 217 at 227–28.

8. See Erick J Sam, "Endowment Taxation and Equality of Resources" (2018) 22:1 Fla Tax Rev 243.

9. See *ibid* at 251-55.

10. See e.g. Rosen & Gayer, *supra* note 2 at 333.

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consuming market goods.[11] This incentive—commonly referred to as the "*substitution effect*"[12]—sometimes leads to a reduction in total hours worked.[13] But whether or not it does so, because substitution effects alter the ratio of the respective prices of leisure and consumption that would prevail in a world with no taxation, they inefficiently distort the taxpayer's behavior relative to this idealized baseline, and deter what would otherwise be socially beneficial behavior, thereby producing *deadweight loss*.[14]

Unlike an income tax, an ability tax has no substitution effect: since a person's tax obligations are based upon their maximum potential income—which, it is typically claimed, is *fixed* by their endowment—the individual cannot reduce their tax bill by working fewer hours and substituting leisure for consumption.[15] Thus, their tax bill should rationally be regarded as a sunk cost, and exert no distortionary influence on their behavior.[16] The only other type of tax that can claim so much is a *head tax*, which imposes a lump sum obligation on all taxpayers, irrespective of their income or assets.[17] However, unlike a head tax, which takes proportionally more from those with less, the endowment tax scales to some prima facie morally pertinent feature of taxpayers, i.e., earning ability, and is also compatible with a *progressive rate structure*—meaning that higher rates could be placed on higher potential income levels. It is claimed, then, that with the endowment tax, efficiency and fairness meet as friends, not foes.

A second important economic argument for the endowment tax[18] is that it functions as an *ideal Haigs-Simons income tax*.[19] This regime, which is often regarded as the analytically purest form of income taxation (and which most realization-based income tax only imperfectly approximate), would tax the value of a person's consumption plus all accretions to their wealth over a given period of time.[20] Accordingly, because a person gains a great deal of human capital at birth in the form of their innate and socio-economic endowment, an ideal Haig-Simons income tax would, at such time, tax the value of this capital, which equals the present value of the person's maximum potential future cash flows.[21] A failure to tax endowment in this way deviates from the analytic ideal, and also offers

11. *Ibid* at 417.
12. *Ibid*.
13. This will not always be the case, since the substitution effect must contend with a second and opposing behavioral incentive produced by an income tax. *Ibid.* Because an income tax extracts wealth from the taxpayer and leaves them poorer, they are pushed to work more than they would have in the tax's absence. This is called the "*income effect*." *Ibid.* In general, whether a taxpayer will work a greater, equal, or lesser number of hours will turn on the comparative sizes of the income and substitution effects.
14. See *ibid* at 336, 341–43.
15. See *ibid* at 333.
16. See *ibid*.
17. *Ibid* at 332-33.
18. See Sam, *supra* note 8 at 259-62.
19. See Louis Kaplow, "Human Capital Under an Ideal Income Tax" (1994) 80:7 Va L Rev 1477 at 1477.
20. See Henry C Simons, *Personal Income Taxation: The Definition of Income as a Problem of Fiscal Policy* (University of Chicago Press, 1938) at 50.
21. Kaplow, *supra* note 19 at 1481-83.

preferential treatment for human over physical capital. It might be claimed that such treatment could therefore bias investment decisions in favor of human capital, potentially generating inefficiencies.[22] Because one's genetic human capital (at least) is forcibly conferred upon them and not chosen, however, it is hard to see how failure to tax endowment at birth could cause significant distortions of this sort.[23]

Still, the prior argument might be given a justice-based formulation: this variant would assert that, because both are accretions to wealth, as a matter of *fairness*, the State should not discriminate between endowed human and physical capital, and should thus tax the two similarly.[24] But, at least as stated, this argument in favor of endowment taxation is open to the objection that there may be important differences between human and physical capital that defeat the analogy.[25] For instance, certain components of one's human capital are properly regarded as constitutive of the *self*, rather than as property.[26]

Although this *naïve argument from fairness* is, as stated, plausibly parried by our adduced disanalogy, there are other, more sophisticated fairness-based arguments for endowment taxation in the offering that are not so easily undermined. These include arguments that highlight the endowment tax's seemingly attractive neutrality between individual preferences for consumption versus leisure (i.e., one who works to finance higher consumption in lieu of leisure is not penalized with a higher tax bill, as under an income tax),[27] as well as its potential to avoid exacerbating certain welfare disparities that income taxation might aggravate.[28]

Perhaps the most important fairness-based based argument for endowment taxation[29] asserts that the tax is mandated by *luck egalitarianism*, a highly influential philosophical approach to distributive justice.[30] Luck egalitarianism, according to its standard textbook presentations, is the view that justice requires the concurrent (i) neutralization of brute luck, and (ii) allowance of option luck, where 'brute luck' refers to undeserved outcomes caused by factors outside of a person's control, and 'option luck' refers to (at least reasonably foreseeable) results of calculated risks or gambles voluntarily undertaken by autonomous agents.[31] The luck egalitarian argument for endowment taxation is

22. See Sam, *supra* note 8 at 259-62.
23. See Lawrence Zelenak, "The Reification of Metaphor: Income Taxes, Consumption Taxes and Human Capital" (1995) 51:1 Tax L Rev 1 at 13; Sam, *supra* note 8 at 260-62.
24. See Kaplow, *supra* note 19 at 1504.
25. See Sam, *supra* note 8 at 262-264.
26. See e.g. Robert Nozick, *Anarchy, State, and Utopia* (Basic Books, 1974) at 228–29.
27. See David F Bradford, *Untangling the Income Tax* (Harvard University Press, 1986) at 155–56; Daniel Shaviro, "Endowment and Inequality" in Joseph J Thorndike & Dennis J Ventry Jr, eds, *Tax Justice: The Ongoing Debate* (Rowman & Littlefield, 2002) 123 at 123-24.
28. Shaviro, *supra* note 4 at 406.
29. Shaviro, *ibid* at 417–18; Shaviro, *supra* note 27 at 140–41.
30. Influential articulations of luck egalitarianism include Eric Rakowski, *Equal Justice* (Clarendon Press, 1991); Richard J Arneson, "Equality and Equal Opportunity for Welfare" (1989) 56:1 Philosophical Studies 77; GA Cohen, "On the Currency of Egalitarian Justice" (1989) 99:4 Ethics 906; Ronald Dworkin, "What Is Equality? Part 2: Equality of Resources" (1981) 10:4 Philosophy & Public Affairs 283.
31. See e.g. *ibid* at 293.

straightforward: because one's potential earnings, it is claimed, are entirely due to brute luck factors—in particular, one's genetic and socio-economic endowment—while one's actual earned income is generally the consequence of one's option luck—viz., autonomous choices regarding how many hours to work, what sort of work to do, and how to trade off consumption for leisure—a tax base encompassing potential earnings better comports with the twin guiding aims of luck egalitarianism.

* * *

In response to these arguments, critics of the endowment tax have argued that rights violations or injustices to the well-endowed outweigh or otherwise obviate the regime's other putatively efficient and equitable features.[32] An endowment tax, they observe, may sometimes force a person to work a high-paying job that they hate but towards which their talents are suited in order to meet their tax bill, which is determined by their maximum potential earnings. This condition of *talent slavery* has been claimed to be objectionable on a number of grounds, three of which I'll briefly consider.

First, John Rawls has argued that talent slavery violates the right to "*free choice of occupation*," which he suggests should be regarded as a *basic liberty*.[33] Pursuant to his influential domestic theory of justice,[34] it should therefore enjoy lexical priority over the competing economic benefits of endowment taxation.[35] In response, some have questioned whether Rawls's reasoning here would not equally apply to an income (or consumption) tax as well,[36] since all taxes (at least at the sorts of rates that prevail in modern western democracies) force one to work substantially more hours, or at a higher paying job, than one otherwise would have to in order to maintain some desired standard of living. The force of this objection to Rawls is likely to turn, *inter alia*, on the precise scope and (unless one accepts Rawls's scheme of strict lexical priority) the weight of this purported right.

Second, David Hasen has argued that political liberalism requires that civil society be "*Pareto-superior to the state of nature*": that is, no individual can be made worse off, and at least some individuals must be made better off, as a result of transitioning from this pre-political baseline.[37] Because talent slavery may force highly self-reliant individuals ('John Wayne types') into the sphere of

32. See Sam, *supra* note 8 at 269-82. A further efficiency or welfarist objection is that endowment taxation might divert individuals from low paid work or non-market activity that comes with various positive social externalities or imputed incomes. See Liam Murphy & Thomas Nagel, *The Myth of Ownership: Taxes and Justice* (Oxford University Press, 2002) at 123–24; Linda Sugin, "A Philosophical Objection to the Optimal Tax Model" (2011) 64:2 Tax L Rev 229 at 245-46.

33. John Rawls, *Political Liberalism* (Columbia University Press, 1993) at 228 [emphasis added].

34. See John Rawls, *A Theory of Justice*, revised ed (Belknap Press, 1999) at 52–78.

35. See John Rawls, *Justice as Fairness: A Restatement*, ed by Erin Kelly (Belknap Press, 2001) at 158.

36. See Kirk J Stark, "Enslaving the Beachcomber: Some Thoughts on the Liberty Objections to Endowment Taxation" (2005) 18:1 Can JL & Jur 47 at 49.

37. David Hasen, "Liberalism and Ability Taxation" (2007) 85:5 Tex L Rev 1057 at 1063 n 15 [emphasis added].

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commerce, when they would do better if left to their own devices, an endowment tax could (unlike an income tax) conceivably violate this proviso. Hasen motivates this Pareto-superiority condition by arguing that its fulfillment is necessary for the State to infer its citizens' tacit consent to governance, which in turn is required for its legitimacy.[38] However, the tacit consent theory of political legitimacy is famously beleaguered by numerous pressing philosophical objections.[39] Unless this theory can be rehabilitated, the Pareto-superiority requirement must be motivated in some other way if Hasen's argument is to have legs.

Third, Liam Murphy and Thomas Nagel have argued that, even if talent slavery does not violate a basic liberty or right, it would still be objectionable because it produces *quantitatively greater liberty costs* than those produced by income taxation.[40] Note, though, that this argument requires at least two assumptions. The first is that markets are fairly *lumpy*, i.e., part-time work is not readily available.[41] Where this assumption is not satisfied, a person will often be able to meet their tax bill by working a high-paying job on a limited part-time basis; in that case, however, it can hardly be claimed that the endowment tax burdens place unreasonable demands on them. But because, as an empirical matter, markets are generally lumpy, this presupposition is not problematic. The second and somewhat more critical assumption is that the *social endowment realization ratio* (SERR), defined as the aggregate earned income of a society's members over their aggregate potential income, is not very low.[42] Where this ratio is sufficiently small, moving to an endowment tax would significantly expand the tax base, permitting for sizeable reductions of the rates on high potential-earners. These reductions, in turn, would substantially reduce the problem of talent slavery.[43] Because it is at the very least unclear whether the SERR will generally be low enough to substantially eliminate talent slavery, however, this response does not provide a categorical solution to Murphy and Nagel's worry. Indeed, it is unclear what the SERR is in the U.S. or Canada at present, and so it is unclear how much practical mileage endowment tax partisans can eke out of these considerations.[44]

* * *

This completes our brief overview of common arguments over the endowment tax's merits. In the remainder of this Article, I shall develop my own line of objection to endowment taxation. In particular, I contend that, once we understand how a person's earning ability and potential income are properly understood and appraised, we shall see that a tax on these quantities would lead to

38. *Ibid* at 1062, 1087.
39. See A John Simmons, *Moral Principles and Political Obligations* (Princeton University Press, 1979) at 57–100.
40. Murphy & Nagel, *supra* note 32 at 121–25
41. See e.g. Shaviro, *supra* note 4 at 414.
42. Sam, *supra* note 8 at 281. For the concept of an endowment realization ratio, see Chris William Sanchirico, "Progressivity and Potential Income: Measuring the Effect of Changing Work Patterns on Income Tax Progressivity" (2008) 108:7 Colum L Rev 1551 at 1568.
43. Sam, *supra* note 8 at 281.
44. *Ibid*.

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various unfair or otherwise undesirable outcomes, which give us good grounds for rejecting the ability tax. At the very least, these arguments should diminish its appeal as the theoretical ideal it has been touted to be by economists, legal scholars, and philosophers.

II. Taxonomizing Potential Earnings and the Trilemma Introduced

As alluded to above, potential earnings are typically understood to mean the maximum income that a person '*could earn*' or '*could have earned*' over the relevant time period. But as we shall see, this definition suffers from a considerable amount of ambiguity and imprecision. As philosophers know all too well, such *counterfactual conditionals*[45] and other *modal claims*—that is, statements about possibility (and necessity)—can be interpreted in a variety of ways. Surely enough, in this Article, I will argue that in order to determine the income a person 'could have earned' over some time period, we first must answer a number of preliminary questions about the sort of possibility that we are interested in. Thus, in the next section III, I expound upon a number of important conceptual distinctions between different understandings of potential earnings, which have received inadequate attention in the endowment tax literature. In carving up logical space in this way, my goals are twofold.

First, I hope to clarify the current debate by making clear the full range of taxation instruments at the endowment tax theorist's disposal, as each such instrument tracks a different understanding of 'potential earnings' and constitutes a distinct appraisal of a person's earning ability. Second, however, I wish to establish that none of these alternative tax regimes is without serious problems, and that a thorough survey of this conceptual terrain demonstrates several sources of tension at the very core of the ability tax program.

My main argument—which I refer to as the *Misalignment Argument*—may be roughly stated as follows. If we are unable (due to taxpayers' inability to convert future earnings into present cash flows) or unwilling (due to infringements on the taxpayer's autonomy) to *prospectively* impose an endowment tax on the net present value of a person's future potential earnings at birth, we will then be required to administer an ability tax *retrospectively* on the maximum wages that a person could have earned over a given time period. But retrospectively appraising potential earnings is an inherently counterfactual enterprise: in order to determine the maximum income that a person could have earned, we must consider various sorts of *hypothetical* scenarios that could have—but did not actually—arise. The incorporation of this counterfactual data into our appraisal of potential earnings is required, both as a matter of conceptual precision as well as to create an efficient incentive structure in some cases. However, the burdensomeness and revenue effects of a tax are determined by the world's *actual* state of affairs at the time at which the tax is imposed. It follows that the more

45. For an accessible introduction, see Theodore Sider, *Logic for Philosophy* (Oxford University Press, 2010) at 199-226.

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comprehensive a measure for potential earnings we adopt, and the more fastidiously a backwards-looking ability tax tracks its own desiderata, the greater the potential for introducing additional unfair or unsavory results.

In tandem, these considerations place the endowment tax theorist in the following *Trilemma*. They must either accept:

(i) A prospective endowment tax that, even if serviceable, is antithetical to the values of autonomy and neutrality;
(ii) A watered down form of retrospective endowment taxation that is unattractive on its own terms, and in some instances yields an inefficient incentive structure; or
(iii) A conceptually principled retrospective endowment tax that introduces emergent inequities, among other troubles.

I will submit that none of these options is particularly inviting. With respect to (iii), in particular, this Article contends that once we appreciate what the most conceptually principled forms of endowment tax require of certain taxpayers, we should reject such regimes as unfair and unduly burdensome. Consequently, our analysis shall significantly detract from endowment taxation's appeal as a theoretical ideal, or normative benchmark, against which we might compare the desirability of more practicable policy proposals.

Having set the stage for the Misalignment Argument, I'll now begin exploring a number of distinctions between various taxational instruments that track different conceptions of potential earnings, all of which may be considered *species* of the endowment tax. In particular, distinctions will be drawn between ability taxes that are:

a) prospective versus retrospective
b) cultivated versus raw
c) intra-world versus cross-world
d) ex post versus ex ante
e) objective versus subjective.

All of this terminology shall be explained in due course. Before embarking on this course, however, an important preliminary qualification is in order. The following discussion assumes that, at least for purposes of endowment taxation, one's 'endowment' is to be defined in terms of their earning ability and maximum potential earnings. But note that this core definition might be challenged.[46] For instance, as per suggestions due to Richard Musgrave and Richard Arneson, endowment might be reconceptualized in terms of potential for welfare.[47] Alternatively, Lawrence Zelenak has suggested that endowment might be thought of as "potential earnings plus or minus the utility or disutility

46. Zelenak, *supra* note 4 at 1162-69.
47. See *ibid* at 1163; Richard Musgrave, "Maximin, Uncertainty, and the Leisure Trade-Off" (1974) 88:4 Quarterly J Economics 625 at 631; Arneson, *supra* note 30.

associated with the work necessary to generate those earnings."[48] Scrutiny of these alternate definitions lies outside the scope of this Article, and I shall leave it as an exercise for the reader to consider how such revisions to the concept of endowment might impact the arguments and analysis that I offer in the subsequent sections.

Even if my arguments were ultimately found to be ineffective against endowment taxes based upon such welfarist or mixed welfarist-resourcist conceptions of endowment, however, I would certainly not take this as a reason for disappointment. In that case, I would be quite content to have undermined the desirability of a *tax based upon potential earnings,* as it is this regime that has generally been upheld as a first-best ideal among those public finance economists, legal scholars, and political philosophers referenced above. Indeed, in this scenario, my arguments would take on the additional dimension of importance of providing reasons, not previously appreciated in the law and philosophy literatures, for why we might ultimately do best to reject taxes and other distributive policies based solely upon earning ability in favor of those that also factor in subjective labor burdens, among other welfare-based considerations. These results would be at least as significant as a rejection of endowment taxes *tout court*.

With these preliminary remarks in mind, let me begin our taxonomic investigation into the various species of the ability tax—conceived, as per the above, as a tax on earning ability and potential income—by considering the distinction between a prospectively and retrospectively administered tax.

III. Distinctions Between Different Forms of Ability Taxation

A. Prospective and Retrospective Ability Taxation

Our first distinction is an outlier, in that it does not concern different conceptions of potential earnings, but rather different ways of *levying* an endowment taxation. Nevertheless, as the reader shall see, the differential impact of these two taxing approaches plays a significant auxiliary role in my general Misalignment Argument. In principle, an endowment tax could be fashioned either as a one-time tax *prospectively* administered at some moment prior to the taxpayer embarking on their professional career, or as an annual tax *retrospectively* levied on the individual's maximum potential earnings for the prior year (or other applicable time period). I contend that the latter type of tax is strictly preferable, for two reasons.

First, prospective administration is predicated upon the implausible assumption that future earnings can generally be translated into a present ability to pay.

48. Zelenak, *supra* note 4 at 1166. For analysis tending in this same direction, see also Kristi A Olson, "The Endowment Tax Puzzle" (2010) 38:3 Philosophy & Public Affairs 240 at 265. While Zelenak's suggestion enjoys intuitive appeal, it is unclear how metaphysically heterogeneous items, i.e., welfare and income, could be meaningfully aggregated.

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For instance, in the regime put forth by Louis Kaplow as a theoretically ideal form of Haigs-Simons income taxation, the tax would be imposed at birth on the net present value of a person's future potential earnings.[49] In more temperate incarnations, the tax could instead be levied on the taxpayer's 18th birthday (among other putative possibilities). In either event, though, to obtain the liquidity needed to meet their tax obligations, an individual would need to contract with employers ahead of time, exchanging a promise to work in future years for advance payment. If this anterior bargaining were not feasible, prospective implementation of the tax would prove futile, and the taxpayer would lack the liquidity required to satisfy their obligations.

And as a number of commentators have observed, the empirical evidence suggests it is not generally possible to borrow against one's human capital.[50] Because specific performance for personal services bears an uncanny and distasteful resemblance to forced servitude, demanding such performance is legally forbidden[51]—and rightfully so, for reasons to be discussed below in relation to the autonomy objection to a prospective endowment tax. Consequently, employers are normally unwilling to provide advance payment in return for an agreement to render services in future years. There are two exceptions to this pattern: in the case of educational loans and home mortgages, the amount of a loan will often depend in part on perceived future earning ability.[52] Yet, as Zelenak has argued, these cases are "far too narrow to justify general tax accrual of human capital."[53] He explains:

> These types of loans are irrelevant for anyone who would like to borrow against his human capital for any other purpose. Even when the borrowing is for an accepted purpose, the amount that can be borrowed is a small fraction of the total present value of one's human capital … Moreover, the limitation on the use of the loan proceeds—education or home purchase—means that even the borrowed funds create no ability to pay the tax.[54]

Even if it were often possible to obtain advance remuneration in the 'normal' case where a person maximizes their earnings by selling their labor to a small number of employers over the course of a lifetime, there are a host of alternate yet common enough scenarios where it would be far more difficult to borrow against the full value of one's human capital. Consider individuals who would maximize future earnings through: (i) self-employed provision of goods or services to a legion of small customers, (ii) extensive financial investment, or (iii) employment with a type of employer, or in a field, which does not yet exist at the time the tax is implemented. In such circumstances, the taxpayer would likely be forced to compromise: in order to acquire the liquidity needed to pay their tax bill, they

49. Kaplow, *supra* note 19 at 1481.
50. See e.g. Zelenak, *supra* note 23 at 9.
51. *Ibid*.
52. *Ibid* at 9-10; Kaplow, *supra* note 19 at 1505 n 65.
53. Zelenak, *supra* note 23 at 10.
54. *Ibid*.

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would have to contract for an economic arrangement—which more closely resembles the 'normal case'—that would not maximize their future income. This result would be both inefficient (as it would deter wealth-maximizing behavior) and, if the tax were calculated based on the individual's true maximum rather than on their compromised earnings, patently unfair.

For the sake of argument, however, let us ignore these problems for the time being and suppose that it would generally be possible to contract with employers, customers, and investors in advance, such that a person could borrow against the full value of their human capital for a promise to render future services. Nevertheless, the prospective endowment tax would still constitute a violent affront to political liberalism, and must therefore be rejected.

To see why, consider that a key guiding value underlying political liberalism is state *neutrality* between competing conceptions of the good. Though it has received numerous formulations,[55] the core idea is simple enough: the State must not arbitrarily or unjustly discriminate between different conceptions of the good, viewpoints, or ways of life, so long as they do not result in harm to others.[56] A second, equally important liberal value—one which might even undergird neutrality—is *autonomy*. While here, too, there are many details to be filled out,[57] in very broad strokes autonomy involves self-governance free from noxious external interference.[58] Neutrality and autonomy were famously championed by John Stuart Mill in his foundational text *On Liberty*, where he argued that a free market of ideas and multiplicity of lifestyles is essential to the health of a society.[59] Social experimentation free from state interference, discrimination, and approbation, Mill contended, is the key to discovering those arrangements that maximize individual well-being.[60]

Now there are many different ways that state action might violate the neutrality and autonomy principles. Of course, the most egregious would involve explicit and arbitrary favoritism towards or suppression of particular viewpoints, or coercion to adopt certain ways of life. Yet less direct methods may also be insidious. In general, any policy that has the intended or unintended consequence of subverting those social conditions necessary for the open exploration and reasoned consideration of a diversity of perspectives and lifestyles will be antithetical to the substantive aims of these values.

55. See e.g. Bruce A Ackerman, *Social Justice in the Liberal State* (Yale University Press, 1980); Joseph Raz, *The Morality of Freedom* (Oxford University Press, 1986) at 110-33; Will Kymlicka, *Liberalism, Community, and Culture* (Clarendon Press, 1989) at 76-83, 95-97.

56. The 'harm principle' arguably receives its fullest explication in Joel Feinberg, *Harm to Others: The Moral Limits of the Criminal Law*, Vol 1 (Oxford University Press, 1984).

57. See Joel Feinberg, *Harm to Self: The Moral Limits of the Criminal Law,* Vol 3 (Oxford University Press, 1986) at 27-94 for in depth-treatment of different conceptions of autonomy and theories of its value.

58. Or, in the cases of various sorts of psychopathology, internal interference.

59. See John Stuart Mill, *On Liberty* (John W Parker & Son, 1859).

60. *Ibid*. Commitments to neutrality and autonomy also plausibly undergird John Rawls' influential account of political liberalism. See Rawls, *supra* note 33.

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But the prospective endowment tax is objectionable on just these grounds. For in order to acquire the liquidity needed to pay one's lifetime tax obligation, an individual would need to contract with one or more employers for the provision of services over the course of their lifespan (or, at least, for a long enough period to generate the income required to pay the tax) in return for upfront payment. If the person were well-endowed and markets were lumpy, this might lock them into many years of talent slavery. Of course, where markets are smoother, one may be able to contract for a somewhat less onerous work schedule; but because lumpiness is the rule rather than the exception, such cases would be rare.

Moreover, even if part-time work were readily available, an individual would often be forced to commit to a particular full-time educational track in advance. If the taxpayer were unable to ensure employers that they would acquire those qualifications necessary for successful job performance, employers would almost certainly be unwilling to provide upfront payment. Thus, to secure an advance on even part-time future employment, the taxpayer would often need to bind themself to a full-time educational or training program.[61]

In the majority of scenarios, then, the following trouble arises. By requiring a person to commit to such a substantial undertaking from so early on, the prospective endowment tax deprives them of crucial opportunities for self-discovery: experimenting academically and professionally, learning what they find meaningful and banal, trying and failing, and changing their mind. By stymying the process of intellectual and practical exploration, the prospective endowment tax divests one of the chance to consider and ascertain those lifestyles and conceptions of the good that most strongly resonate with them. Prospective endowment taxation is thereby distinctly illiberal, as this '*lock-in*' *effect* stamps out a necessary precondition for any meaningful effectuation of the autonomy and neutrality principles.

By contrast, retrospective annual administration of an endowment tax allows a taxpayer to progressively acquire liquidity on their own terms, at least to the extent consistent with the tax's existence. Since the taxpayer in this case is not required to sign a multi-decade employment contract at an early age, they are permitted to navigate between any number of feasible academic and professional paths that still provide them with the income required to meet their tax obligations. Retrospective

61. Couldn't the prospective tax instead be administered subsequent to the completion of the taxpayer's education, say on their 23rd birthday? Yes—in theory. In practice, however, market forces would likely conspire to make a mockery of the government's good intentions, and to produce similar results as a tax imposed prior to consummation of academic training. Knowing that they would ultimately need to lock themselves into years of employment in order to acquire liquidity, citizens would race to line up their preferred positions in advance. Those who waited until the deadline would often be beaten to the punch by their more punctual peers, and forced into jobs where they exhibited little interest. To avoid being left in the dust, taxpayers would often have to pledge substantially prior to the completion of their education.

Furthermore, even if this sort of race did not arise, a prospective endowment tax administered on one's 23rd birthday would still lead to the sort of professional 'lock-in' discussed below. While a person would not be robbed of the opportunity to explore different educational pathways, they would still have to contractually commit themself to many years of employment upon completion of their education, and thereby forfeit the opportunity to explore different careers feasible with their educational credentials.

endowment taxation therefore pays heed to the liberal's concern for autonomy and neutrality, which the prospective tax undermines.

In sum, the prospective endowment tax is objectionable on two grounds. First, since it is not generally possible to borrow against the full value of one's human capital, taxpayers would almost certainly be unable to translate future earnings into a present ability to pay. Ultimately, this liquidity problem would render the tax unworkable. Second, even if we ignore such difficulties, the prospective ability tax should be rejected on the grounds that it undermines those conditions necessary for self-discovery, and therefore subverts any meaningful effectuation of the liberal autonomy and neutrality principles. A retrospective endowment taxation is to be strictly preferred. Such a tax may take any of the forms discussed below.

B. Raw and Cultivated Ability Taxation

We now turn to our first (of four) distinctions between different conceptions of a person's 'potential earnings': the distinction between raw and cultivated earning potential.

On the one hand, potential earnings may be understood as those wages a person could have earned had they entered the labor market at the beginning of the relevant tax period in search of the highest paying job available, assuming we *hold fixed* the entirety of the person's actual prior life history. Call a tax on such income a '*perfectly cultivated*' ability tax, since the person's tax obligation is a function of their (near) presently developed earnings capacity.

Alternatively, potential earnings might be thought of as those wages a person could have earned *had they taken all those past steps* that would have maximized their earning ability for the period in question. These efforts may have included acquiring the education, job training, professional contacts, or work experience needed to fully develop or signal their innate potential (and which they may not have, in fact, acquired). Call a tax on such an amount a '*perfectly raw*' ability tax, since the tax base is defined by reference to the person's raw, rather than developed, income potential.

Falling in between a perfectly cultivated and perfectly raw tax is a '*partially cultivated*' (or, equivalently, a '*partially raw*') ability tax, in which *a portion* of a person's prior life history is held fixed, while the remainder is left open to counterfactual inquiry. Call this moment of counterfactual departure 'T_1.' So, for example, a partially cultivated ability tax might hold as constant a person's life up to their 21st birthday, which would be regarded as T_1, and then analyze which decisions after that point would have maximized their present earning potential.[62]

62. Rawls recognized that the appraisal of potential income is a highly time-dependent enterprise when, in his exchange with Richard Musgrave over the endowment tax, he asked "at what time of life the tax is to be assessed." John Rawls, "Reply to Alexander and Musgrave" in John Rawls, *Collected Papers*, ed by Samuel Freeman (Harvard University Press, 1999) 232 at 253. See also Sanchirico, *supra* note 42 at 1564-65, 1571-72 (distinguishing between 'long run' and 'short run' potential income, and employing the latter because it is a more epistemically tractable measure).

As it shall soon become clear, each of the economic and fairness-based arguments for endowment taxation that we considered above in section I generally favor raw over cultivated ability taxation. To see why, begin by recalling that the standard economic rationale for endowment taxation involved the tax's purported lack of substitution effects and corresponding absence of deadweight loss. Because a person's tax obligation is determined by factors outside of their conscious control, they cannot reduce their tax liability by altering their economic behavior. As one's actual choice of work has no bearing on their tax obligation, an individual would not be able to reduce their taxes by working less and substituting leisure for consumption. This result is claimed to be efficient, since the tax creates no distortionary incentive to modify one's economic decisions relative to the no-tax baseline.

In the case of a cultivated ability tax, however, a person's potential wages for a given year *will vary* in accordance with how they have previously chosen to develop or signal their raw human capital. And because an individual's tax obligations are sensitive to these past decisions, a cultivated tax will lead to the creation of inefficient behavioral incentives.[63] In fact, the very substitution effects (and deadweight losses) that endowment taxation was engineered to avoid reappear *further back* in the historical chain of a person's life decisions. To illustrate this point, consider the following example:

> ***Law School***: Taxpayer would ideally like to work 50 hours per week at Easy-Going Midwestern Law Firm and spend the rest of their time developing their jazz-funk guitar playing. To reliably ensure that they obtain such a position, Taxpayer would need to acquire a juris doctor from Prestigious Midwestern Law School. If they were to earn this degree, however, Taxpayer would then be in a position to be hired by Big New York Law Firm, which pays a much higher salary but requires a more stressful work schedule. While Taxpayer would ideally like to work for Easy-Going Midwestern Law Firm, they would prefer a minimum wage job at Seven-Eleven to a life as a Big New York Law Firm Associate. Moreover, should they acquire their juris doctor from Prestigious Midwestern Law School, the recently enacted cultivated ability tax regime would then require Taxpayer to work full time at Big New York Law Firm to satisfy their annual tax obligations. Taxpayer opts to avoid law school and works at the local Seven-Eleven for about 40 hours a week.

Here, the cultivated ability tax clearly influences Taxpayer's economic behavior relative to a no-tax baseline. The resulting distortion is functionally akin to a substitution effect. In particular, the regime makes obtaining a law degree from Prestigious Midwestern Law School more 'expensive' for Taxpayer, as the expected future benefits of this educational investment are (i) greater than those from working at Seven Eleven in the absence of the tax, but (ii) less than the latter in the tax's presence. As a consequence, our protagonist chooses to forgo developing their human capital and instead opts to work fewer hours in a lower paying sector of the economy. The reappearance of substitution effects—and

63. See Sugin, *supra* note 32 at 252.

consequently deadweight losses—further back in Taxpayer's life history calls into question much of the standard economic motivation for ability taxation.

Next, observe that cultivated ability taxation is also deficient from the point of view of those fairness-based arguments for endowment taxation briefly considered earlier. Under a cultivated ability tax regime, a person can avoid taxation on some portion of the human capital they receive at birth by forgoing those educational and signaling decisions that maximize future earning potential. Thus, a cultivated ability tax would discriminate between physical and human capital in the way that the naïve argument from fairness claimed to be objectionable. The cultivated tax is also objectionable from the point of view of luck egalitarianism, since differences in potential earnings that result from educational or signaling choices are clearly attributable to option luck, rather than to brute luck, and as such are not the proper objects of redistribution. Finally, because these past choices reflect individuals' preferences for leisure relative to consumption, the cultivated ability tax objectionably discriminates between what Shaviro characterizes as mere "commodity preferences."[64]

Lest it be thought wholly without merit, however, note that cultivated ability taxation does have one highly significant virtue: *it ameliorates the problem of talent slavery*. In our ***Law School*** case, because Taxpayer's potential earnings are partially within their control, they can navigate their educational choices to avoid being consigned to a job they suspect that they will ultimately hate. This is to be contrasted with the case of perfectly raw ability taxation, where an individual's tax bill is determined independently of their educational and professional choices, and where they are therefore helpless to prevent their consignment to a job they may find execrable.

Generalizing from these observations, we extract the following rule: the more cultivated a retrospective ability tax is—i.e., the greater that portion of the taxpayer's actual life history prior to the current tax period that we hold fixed in determining their potential earnings—the more likely a regime is to simultaneously:

(i) produce results that are undesirable from the perspectives of efficiency and fairness considered above, but
(ii) further mitigate the problem of talent slavery.

In the limit, only a perfectly raw tax, in which no part of the taxpayer's actual life history is held fixed, could completely eliminate the unsavory results referenced in (i). However, such a tax wholly fails to address the problem of talent slavery. Conversely, because a perfectly cultivated ability tax, in which the taxpayer's entire life history prior to the relevant tax year is held fixed, is *only one step removed* from an income tax (where talent slavery poses no threat), the troublesome consequences described in (i) would be most pronounced, while talent slavery would also be the most tempered.

64. For this description, see Shaviro, *supra* note 27 at 123-24.

How are these trade-offs to be negotiated? At least from a theoretical perspective, a raw tax is clearly preferable to a cultivated tax along those normative dimensions that initially motivated the ability tax program. Thus, if one takes seriously those pro-endowment tax arguments considered above in section I, and is also not completely swayed by the problem of talent slavery, one could not reasonably endorse a perfectly cultivated tax. For if the normative pull of those former considerations were so weak, or the specter of talent slavery so unnerving, that it prompted a theorist to endorse a perfectly cultivated ability tax, we should wonder why such theorist would not take matters *just one step further and insist upon an income tax*. In other words, if one were so unimpressed with the economic and philosophical case in favor of endowment taxation—or so concerned with talent slavery—that one opted to hold fixed the taxpayer's entire actual life history *except* for the present tax period (as per a perfectly cultivated ability tax), what would stop this interlocutor from going the full mile and holding fixed the taxpayer's whole life, including the present taxing period, thereby taxing their realized income? We see, then, that *if* one is to endorse an endowment tax over an income tax, theoretical consistency demands that one's choice regime should (at the very least) be somewhat closer to a perfectly raw tax than to a perfectly cultivated one; that is, that T_1 be set closer to the taxpayer's birth than to the present year.

In addition to being favored by the endowment tax's underlying normative motivations, a perfectly raw ability tax also employs what is a conceptually and metaphysically superior appraisal of earning ability. In our ***Law School*** example above, for instance, it is beyond dispute that the Taxpayer's initial endowment includes the talents required to ultimately earn income as a Big New York Law Firm Associate. When they opt to avoid law school, Taxpayer chooses to avoid exercising a capacity that they clearly possess.

Notwithstanding these considerations in favor of raw ability taxation, however, a perfectly raw tax would sometimes give rise to what we may call *absolute talent slavery*, in which a well-endowed person would, short of consigning themself to a life in debtor's prison, be locked into a single career from birth, and thereby deprived of all discretion for how to shape their life's story. This regime would be objectionable for many of those same reasons as the prospective endowment tax discussed above, in virtue of locking well-endowed citizens into a small number of predetermined paths and thereby undermining the liberal values of neutrality and autonomy.

To avoid such outcomes, the endowment tax proponent must therefore retreat from the demands of conceptual analysis, and opt for a less precise but more lenient interpretation of a person's earning ability. It is here that we get our first glimpse at the metaphysics and economics of endowment taxation coming apart. In this case, basing the tax upon the conceptually appropriate understanding of endowment would lead the state to make economic demands of certain taxpayers so burdensome that they cannot be sanctioned in good conscience. More such cases, which collectively give heft to our general Misalignment Argument, are to come.

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C. Raw Ability Taxation: Six Variations on a Theme

Given the troubles that we have seen afflict a perfectly cultivated ability tax (i.e., disregard for the ability tax's underlying normative motivations and the conceptually best understanding of endowment), let us turn our attention to raw ability taxation to see if we can further refine the notion. The category of raw ability taxes (both perfect and partial) can be broken down into at least six distinct subtypes, each of which asserts a prima facie claim to taxing a person's true earning potential.[65]

The first three regimes measure a person's potential wages by reference to what they could have earned under *actual* economic and labor market conditions had they taken those past steps over the relevant time period required to fully develop or signal their human capital. I refer to these regimes as '*intra-world*' raw ability taxes. By contrast, the latter three regimes use the income a person could have earned under a broader array of epistemically feasible but non-realized market conditions as a measure of earning potential. Given this additional counterfactual dimension, these taxes are referred to as '*cross-world*' raw ability taxes.

We will consider each of these alternatives in turn, before attempting to adjudicate between the lot. To illustrate the distinct mechanics of these six taxes, a numerical example is provided in the Appendix to this Article, which the reader is encouraged to work through.

i. Intra-World Earning Potential: Ex Post and Ex Ante, Objective and Subjective

First consider the following three intra-world ability taxes:

- (1) **Intra-world ex post:** Under the first regime, potential earnings correspond to the income a person could have earned under actual economic and labor market conditions had they taken those past steps that, as a matter of ex post fact, would have maximized their earnings for the relevant tax year. Call this an intra-world '*ex post*' raw ability tax, since the tax is calculated with an eye to those decisions that would have been most profitable upon retrospective analysis.
- (2) **Intra-world objective ex ante**: Under the second regime, potential earnings correspond to the income a person could have earned under actual market conditions had they made those decisions that a wholly rational agent in the person's circumstances would have determined had the highest expected return to investment ex ante. Call this an intra-world '*objective ex ante*' raw ability tax.

65. Because a partially raw ability tax is equivalent to a partially cultivated tax—in virtue of holding part but not all of a person's life history prior to the relevant tax year fixed—the following distinctions are also applicable to the latter tax.

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- (3) **Intra-world subjective ex ante**: Under the third regime, potential earnings correspond to the income a person could have earned under actual market conditions had they made those decisions that they (given their actual (sub) rational capacities and the information available to them) would have determined had the highest expected return to investment ex ante. Call this an intra-world '*subjective ex ante*' raw ability tax.

ii. Cross-World Earning Potential: Ex Post and Ex Ante, Objective and Subjective

Now consider the following three cross-world ability taxes. Here, potential earnings are calculated in much the same way as their intra-world analogues, except that worlds with different economic and labor market conditions are included in the relevant set of counterfactual scenarios. Under these three regimes, potential earnings are calculated in accordance with the following procedure.

First, the State would determine all the ways that the economy possibly could have diverged from the actual world subsequent to that moment in time (T_1) at which we stop holding the taxpayer's life history fixed. Call these counterfactual scenarios feasible '*branch lines*.' What moment we regard as T_1 will turn upon the rawness of the tax under consideration. For a perfectly raw tax, T_1 is the taxpayer's birth. A partially raw tax, by contrast, might consider T_1 to be the taxpayer's 21st birthday (among many other possibilities).

Next, the State would assign a *probability* to each feasible branch line, based upon the probability that an Ideal Reasoner with access to all the same information as the Market would have assigned to that scenario at T_1.[66]

The State would then determine the *maximum income* that the taxpayer could have earned for the relevant tax year in each of the feasible branch lines. As with their intra-world analogues, the character of this analysis differs for each of the three cross-world regimes as follows:

- (4) **Cross-world ex post**: Under the fourth regime, this analysis takes on an ex post character. For each feasible branch line, we ask what the taxpayer would have earned in that world had they taken those steps that, in retrospect, we can see would have maximized their earnings in that world.

66. Given this construction, the type of probability advocated here is a form of *epistemic probability*. Epistemic probabilities occupy a halfway position between *objective probabilities* (sometimes called 'chances'), which are 'out there in the world,' and *subjective probabilities* ('credences'), which are an agent's degrees of confidence in a proposition. As they are often construed, epistemic probabilities reflect a logical relation between a hypothesis and its evidence. Here, the hypothesis is a particular branch line's realization, while the evidence is the sum of the Market's information. For a self-contained and accessible discussion of different interpretations of probability as applied to decision theory, see Martin Peterson, *An Introduction To Decision Theory* (Cambridge University Press, 2009) at 133-63. See also Michael D Resnik, *Choices: An Introduction to Decision Theory* (University of Minnesota Press, 1987) at 61-80; Itzhak Gilboa, *Theory of Decision Under Uncertainty* (Cambridge University Press, 2009) at ch 4-5.

- (5) **Cross-world objective ex ante** Under the fifth regime, this analysis takes on an ex ante and objective character. For each feasible branch line, we ask what the taxpayer would have earned in that world had they made those decisions that a wholly rational agent in the taxpayer's circumstances in that world would have determined had the highest expected return to investment ex ante.
- (6) **Cross-world subjective ex ante** Under the sixth regime, this analysis takes on an ex ante and subjective character. For each feasible branch line, we ask what the taxpayer would have earned in that world had they made those decisions that they (given their own (sub)rational abilities and the information available to them in that world) would have determined had highest expected return to investment ex ante.

Finally, the State would *discount* the taxpayer's earnings in each of the feasible branch lines by the respective probability of that world's having arisen and *sum* the results. This probability-weighted average of cross-world income constitutes the taxpayer's 'potential earnings' and serves as our tax base.

To clarify the mechanics of these taxes, it is again recommended that the reader consult the numerical example in the Appendix to this Article. The following table summarizes the distinct economic decisions that the six forms of ability taxes discussed in this section III.C look to in determining a person's potential earnings:

Types of Raw Ability Taxation	Ex Post	Objective Ex Ante	Subjective Ex Ante
Intra-World	Decisions that, in fact, would have maximized the taxpayer's earnings in a world with the same market conditions as the real world.	Decisions that a wholly rational agent would have determined maximized the taxpayer's expected earnings in a world with the same market conditions as the real world.	Decisions that the taxpayer would have determined maximized their expected earnings in a world with the same market conditions as the real world.
Cross-World	Decisions that, in fact, would have maximized the taxpayer's earnings in worlds with either the same or different market conditions than the real world.	Decisions that a wholly rational agent would have determined maximized the taxpayer's expected earnings in worlds with either the same or different market conditions than the real world.	Decisions that the taxpayer would have determined maximized their expected earnings in worlds with either the same or different market conditions than the real world.

D. Deciding Between the Alternatives

For the reasons discussed earlier in section III.B, a perfectly cultivated ability tax should not be an attractive candidate for an endowment tax proponent, on either

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normative or conceptual grounds. If a theorist assigns any significant degree of weight to those policy considerations which initially motivated the endowment tax, or takes the metaphysics of endowed earning ability at all seriously, they should favor an (at least partially) raw ability tax. But which of the six varieties are they to prefer? The answer is not immediately obvious, as each approach utilizes a slightly different though seemingly reasonable measure of a person's raw earning potential. I shall therefore evaluate each of the three distinctions drawn above, in the following order: (i) ex post versus ex ante, (ii) objective versus subjective, and (iii) intra-world versus cross-world.

i. Ex Post versus Ex Ante

First consider the distinction between ex post and ex ante raw ability taxation.

The *ex post regimes* look to those wages a person could have earned—either under actual market conditions, in the case of an intra-world tax, or both actual and non-actual market conditions, in the case of a cross-world tax—had the person possessed the uncanny *luck* to have prepared perfectly in advance. Here, the tax base consists of the maximum wages a person could have theoretically earned under the stipulated economic conditions.

The *ex ante regimes*, on the other hand, look to the wages a person could have earned had they been perfectly *prudent* in attempting to maximize their wealth (although, as the objective/subjective distinction discussed below illustrates, not necessarily perfectly rational). By prudence, I simply mean here the quality of acting to the best of one's (sub)rational abilities to maximize one's expected earnings. Potential earnings here will always be less than or equal to those wages attributed to a person under an ex post regime,[67] and so admittedly do not reflect a person's maximum conceivable income.

Nevertheless, ex ante taxation is rooted in the highly sensible idea that a person should not be penalized for acting prudently by being taxed on income that they could only have earned by adopting an antecedently irresponsible—though retrospectively lucky—course of action. For this reason, ex ante taxation seems to produce a more efficient incentive structure than ex post taxation. Indeed, in situations where a risky investment I_1 has: (i) a low probability of occurrence, (ii) a high payout when it's in the money, but (iii) a lower expected return than some feasible alternative investment I_2, an ex post raw ability tax may create the perverse incentive to gamble on this lower expected return investment I_1 in order to avoid a future scenario where: (x) the risky investment I_1 pays off, (y) the taxpayer is therefore attributed high potential earnings, but (z) because they opted for the lower variance and higher expected return investment I_2, they lack the liquidity needed to satisfy their extravagant tax bill. To illustrate this phenomenon, consider the following example.

67. In the example provided in the Appendix, for instance, Taxpayer's potential earnings are $200,000 under the intra-world ex post regime but only $100,000 under the intra-world objective ex ante regime.

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Spin of the Wheel: Taxpayer can invest their last \$100 on either (A) a spin of the roulette wheel that pays off \$11,000 at the end of the relevant time period with 1% probability and \$0 otherwise, or (B) a *very* highly regarded hedge fund that pays \$115 with 100% probability. The expected value of the spin is: (1% * \$11,000) + (99% * 0) = \$110, providing an expected return on investment of 10%.[68] The expected value of the fund is: (\$115 * 100%) = \$115, providing an expected return on investment of 15%.[69] The fund therefore provides an additional 5% in expected yield relative to the spin. But suppose that *if* Taxpayer were to follow their instincts on this particular occasion and put it all on 'Red 42,' then the wheel would in fact hit and Taxpayer would win \$11,000. Finally, assume that Taxpayer is in a 10% marginal tax bracket, and has no other source of liquidity.

Since \$10,900 is the maximum income Taxpayer could earn if they were perfectly lucky[70] (that is, if they were to make those decisions which, in retrospect, we could see would maximize their earnings), an ex post raw ability tax would include all \$10,900 in the Taxpayer's potential earnings. Furthermore, Taxpayer antecedently knows that *if* (a) they opt for the highest expected value play (the fund), but (b) the wheel happens to pay out, they would then be unable to meet their tax obligations. This is because they would then be attributed \$10,900 in income, giving rise to a tax obligation of \$1,090 (= \$10,900 * 10%), but would only have \$115 from the fund. If they are risk averse, Taxpayer may prefer a lower expected yield to the possibility of debtor's prison. They may then opt for the wheel, notwithstanding its lower expected return. The ex post raw ability tax regime has prompted Taxpayer to deviate from the highest expected yield course of conduct.

Because it does not create such threats, ex ante taxation incentivizes behavior that leads to the long run maximization of aggregate social wealth. As with all rules that are Kaldor-Hicks efficient, in principle, this increase in aggregate wealth could be redistributed to the 'losers'[71] such that the choice of an ex ante regime over an ex post regime would then constitute a Pareto improvement, or according to one's preferred distributive rule. Thus, ex ante taxation should be theoretically preferred by utilitarians and liberal egalitarians (for instance) alike, at least assuming the desired ex post redistribution could be achieved.

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68. = (\$110 - \$100)/\$100

69. = (\$115 - \$100)/\$100

70. Taxpayer's maximum conceivable income would equal the \$11,000 that the wheel pays out *minus* their initial \$100 investment.

71. The 'losers' here are those who would have placed their money on the retrospectively lucky wager (the wheel) if an ex post tax had been in effect to incentivize their gambling, but in fact lose out on this lucky payoff by placing their money on the antecedently wise investment (the fund) in the presence of an ex ante tax. In our ***Spin of the Wheel*** example, if an ex ante tax were in effect and Taxpayer opted for the fund when, as luck would have it, the wheel goes on to pay out \$11,000 for 'Red 42,' Taxpayer could theoretically be compensated by the 'winners' (that is, those taxpayers who also prudently invest in the fund, but who would have played the wheel if an ex post tax were in effect and lost their entire \$100 on 'Black 37') such that Taxpayer still earns \$10,900 but at least some of the transferors end up slightly better off than they otherwise would have been had the ex post tax been in effect.

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In sum, ex post taxation can make a plausible claim to more accurately reflecting the semantic import of endowment taxation, in virtue of taxing the *maximum* potential earnings a person could have earned under the stipulated market conditions. Nevertheless, these considerations are almost certainly outweighed by the ex post regimes' pronounced economic inefficiencies. Relating this result to our broader Misalignment Argument, we now have yet a second instance of the metaphysics and economics of endowment taxation coming apart. In this case, its metaphysics endorses a conception of potential earnings that, if adopted as our tax base, would lead to long-term reductions in aggregate social resources.

ii. Subjective versus Objective

As in many other areas of the law, a distinction is also to be drawn between subjective and objective standards for endowment taxation. While the former are concerned with the deliberative capacities of real individuals, the latter appeal to the calculations of a fictional construct—in this case, what I shall refer to as a *wholly rational agent* (or WRA). More precisely, the *subjective standard* asks what income the taxpayer could have earned had they made those economic decisions which, given their actual (sub)rational tendencies and the information available to them in the relevant world, *they* would have determined had the highest expected return to investment ex ante, had they been solely interested in maximizing profits (that is, perfectly prudent, to use my earlier terminology). On the other hand, an *objective standard* is concerned with the income a taxpayer could have earned had they made those decisions that a wholly rational and profit maximizing agent in the taxpayer's circumstances would have deemed the best uses of the taxpayer's human, financial, and physical capital.

Let us consider the choice between objective and subjective standards from both efficiency and luck egalitarian perspectives. I focus on these normative frameworks for the reason that they are employed by the most common arguments for endowment taxation, discussed above in section I. As we shall see, an objective standard would likely be preferable to a strict subjective standard from both perspectives, although both types of theorists might ultimately opt for a hybrid approach with both objective and subjective aspects.

Initially, an economist concerned with efficiency (as well as a utilitarian who posits a robust long-run connection between wealth maximization and aggregate social utility) will be attracted to an objective standard for the reason that it seems to produce the correct incentive structure. Where an individual is only held to the standards of their own mediocrity, they are likely to remain complacent and set in their ways. An objective standard, by contrast, has the potential to instruct and motivate, prompting the taxpayer to acquire more accurate beliefs and seek out greater profits than they otherwise would have. If they failed to do so, their tax bill could eat through a much greater percentage of their earned income than it would under a subjective standard. Of course, because we are currently assuming that our endowment tax is to be administered retrospectively,[72] the appraisal of a person's potential earnings for a particular tax year could not impact taxpayer behavior for *that* year. In some instances, though, the evaluation of potential earnings for prior tax years may provide information which is useful to the taxpayer going forward. Furthermore, the general knowledge that an objective standard is in place creates a background incentive to increase one's own subjective competences over time.

What of the luck egalitarian? Prima facie, they may be drawn to a subjective standard, on the basis of the following reasoning. The rational capacities that an individual employs in deciding how to put the rest of their human capital to use—their '*decision capital*,' as we might call it—seems to be part of their total endowment. Thus, the receipt and use of decision capital *appears* to be a matter of brute luck. As luck egalitarianism requires us to neutralize all brute luck by calibrating our ability tax to the value of total endowment, it looks as if the theory would therefore recommend the adoption of a subjective standard.

However, this conclusion would be premature. If the capacities used to make decisions for how put the rest of one's endowment to use are considered part of the person's total endowment (and, as such, a matter of brute luck) then the purported distinction between brute luck and option luck *vanishes*, since *all* economic decisions would then be transformed into matters of brute luck. But, in that case, the entire normative framework lapses into incoherence. As discussed above, for the luck egalitarian enterprise to get off the ground, the theory must presuppose a robust demarcation between brute and option luck. Just as causal determinism could, as numerous commentators have observed, threaten to collapse the distinction between the two if one were not persuaded by some form of free will compatibilism,[73] so too would lumping decision capital in with total endowment. If the luck egalitarian hopes to preserve the conceptual integrity of their normative theory, they must therefore retreat to an objective standard, which treats decisions relating to the deployment of human capital as unconstrained by the rest of the taxpayer's makeup.

We've now tentatively settled upon the use of an objective standard for both the incentive conscious economist and the luck egalitarian. Having done so, let us flesh out the standard's content. We must take care to be precise in articulating the features of the WRA, for when our idealized fiduciary is conceived of as a perfect Bayesian intellect, the device has the potential to yield clearly perverse results. For instance, if this sort of '*strong*' *objective standard* was indiscriminately applied to all potential investment decisions, things would quickly go awry. The problem here is that because our perfect Bayesian intellect would be far cleverer than even the most seasoned Wall Street gurus, and since its profits in this domain would not be tempered by the taxpayer's innate limitations,

72. See section III.A, above.

73. See e.g. Cohen, *supra* note 30 at 934; Rakowski, *supra* note 30 at 76-77; John E Roemer, *Equality of Opportunity* (Harvard University Press, 2009) at 6-7; Sam, *supra* note 8 at 267 n 71.

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we may be led to attribute the taxpayer astronomical earnings. If every stock the WRA picks is a winner, only the sky is the limit.

To avoid such absurdities, we might either (i) limit the WRA's access to information, or (ii) weaken the relevant standard of rationality. Under the former approach, the WRA might be granted access only to that information possessed by or proximately available to the taxpayer. Thus, we would exclude scenarios where the WRA is privy to all the information enjoyed by the market, or where the WRA engages in its own meticulous research. But if these informational constraints were found insufficient, or if it were difficult to define precisely what information is 'proximately available' to the taxpayer, we would then do best to pivot from a 'strong' to a '*weak*' *objective standard*. Whereas the strong standard construes the WRA as completely free of human biases and limitations, a weak objective standard would view the WRA as in leagues with the very best human business and financial advisors, i.e., *as a human expert*.

Alternatively, we could instead opt for a *hybrid standard* with both objective and subjective aspects. This regime asks how much income the taxpayer could have earned if their fictional advisor possessed (a) the *minimum* standard of rationality required to (b) *maximize* socially beneficial incentives for the taxpayer to increase their own subjective competencies over time. By custom tailoring the standard to each individual, we can ensure that it is no more demanding than necessary to optimize those incentives which were initially attractive from the standpoint of economic efficiency. The regime is still partially objective, however, since it employs a fictional advisor whose own rational abilities may exceed those of the taxpayer at a given time, and whose hypothetical guidance would serve to educate and motivate. This option will therefore be attractive to the economist concerned with efficiency, as well as perhaps to the luck egalitarian who wishes to preserve some distinction between option luck and brute luck.

To end this discussion on a somewhat unfortunate note, however, it must be observed that even these weak objective and hybrid standards have the potential to yield intuitively inequitable tax burdens, since in some cases it might be necessary to set the WRA's standard of rationality significantly beyond the taxpayer's own present competencies in order to optimize the tax's diachronic incentive effects, as well as to persuasively forestall the collapse of the option/brute luck distinction discussed above. At the end of the day, significant trade-offs between (i) efficiency and conceptual precision, on one hand, and (ii) fairness, on the other, may simply be unavoidable. One will therefore be led to view this result has just one more instance of the misalignment between the metaphysics—indeed, a metaphysics that, for reasons offered above, the luck egalitarian *must* endorse—and the economics of ability taxation. More on this when return our general Misalignment Argument below at section IV.

iii. Intra-World versus Cross-World

1. The Conceptual Superiority of a Cross-World Measure of Earning Ability

Now consider the distinction between intra-world and cross-world ability taxation. Whereas the *intra-world* taxes look only to those wages a person could have earned under actual market conditions for the relevant period, the *cross-world* taxes also take into account a person's maximum wages across a range of alternate economic circumstances in measuring their potential earnings. More precisely, the latter regime weights the person's maximum earnings[74] in each of these counterfactual scenarios by the probability that an Ideal Reasoner with access to all the same information that the Market would have assigned to that branchline at T_1, and then sums the results.

As we shall see in this section, as a purely *conceptual (or metaphysical) matter*, the cross-world tax's *measure* of earning ability is clearly the superior choice. However, in the succeeding section III.D.iii.2, I will go on to argue that there are powerful *policy objections* to actually *implementing* a cross-world ability tax. In light of these objections, cross-world taxation arguably constitutes the clearest case of the metaphysics and economics of endowment taxation falling out of alignment.

The cross-world approach reflects the intuition that the income a person realizes is not just a function of their innate talents and the choices they make for how to develop and signal these raw capabilities. In addition, their earnings also depend upon background facts about how various goods and services come to be valued in a market economy. A number of commentators have emphasized this fundamental point. Rawls, for instance, writes that "native endowments such as intelligence and various natural abilities … are not fixed assets with constant capacity,"[75] and that "potential earnings capacity is not something independent from the social forms and the particular contingencies over the course of life."[76] Rather, natural assets are "merely potential, and their actual realization depends on social conditions."[77] Along similar lines, the tax law scholar Linda Sugin observes that earning capacity is "fluid and changes over time as people make choices and market forces and cultural norms shift."[78] Likewise, in their influential tract on justice and genetics, the bioethicists Allen Buchanan, Dan Brock, Norman Daniels, and Daniel Winkler note that because "the dominant cooperative framework changes over time, the value of various traits also changes. In

74. As explained in section III.C.ii, above, the method of determining maximum earnings in each of these branchlines will vary depending on how one ultimately comes down on the questions of (i) ex post versus ex ante taxation, and (ii) objective versus subjective taxation.

75. Rawls, *supra* note 35 at 158.

76. Rawls, *supra* note 62 at 253.

77. Rawls, *supra* note 35 at 158.

78. Sugin, *supra* note 32 at 252. It should be noted that Rawls and Sugin both take this context sensitivity to suggest that endowment may not be measurable, even as a theoretical matter. However, as I hope my framework for appraising cross-world earning ability illustrates, this more skeptical conclusion does not follow.

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addition, the value of particular traits may depend not only on their scarcity," which is commonly taken to determine economic rents, "but on what may be called *complementarity*—that is, the existence, in sufficient numbers, of persons with other traits with which they can be combined in cooperative interaction."[79]

For these reasons, the cross-world regime utilizes a far more principled and comprehensive measure of earning ability, as it considers how one's talents would monetarily function under a broader range of epistemically possible, though non-actualized, economic conditions. This methodology reduces the influence of accidental features of our own economy's historical path in evaluating a person's (perfectly or partially) raw earnings potential. Embracing the cross-world regime thereby serves as an effective prophylactic against potentially skeptical reactions to the project of appraising endowment. In particular, an intra-world tax's assessment may elicit incredulity with its suggestion that raw human potential, if measurable at all, would have to be assigned an exact dollar value determined by actual market conditions. To many, this valuation would seem far too thin to warrant true conviction. The problem becomes most salient in situations where, as a result of some fluke occurrence in the relevant markets, a taxpayer's earnings are significantly greater or less than either (A) their ex ante expected earnings for that time period or (B) their or similarly endowed agents' earnings from past or future time periods where the anomalous condition fails to materialize. Here, it would be very strange to insist that the individual's earning ability is fully captured by their actual market wage. As the cross-world regime's measure of potential income represents a more robust 'running average' across feasible economic circumstances, it serves to smooth out the effects of such anomalies, and is therefore less susceptible to such skepticism and objections.

A number of further conceptual considerations also weigh in favor of a cross-world measure.[80] For instance, suppose that one is persuaded by Kaplow's thesis that an ideal Haigs-Simons income tax would tax one's endowment at birth.[81] Then the cross-world tax's measure of potential earnings should be deemed attractive on the grounds that it is identical to the future cash flows employed in Kaplow's regime. For in calculating the net present value of endowment (or any asset for that matter), a Kaplovian oracle would:

(i) determine all epistemically possible future states of the world at birth,
(ii) weight them by their respective probabilities of occurrence, as rationally determined on the basis of all information available to the market at the time, and

79. Allen Buchanan et al, *From Chance to Choice: Genetics and Justice* (Cambridge University Press, 2000) at 79-80.

80. In correspondence, Daniel Shaviro has suggested that the property of earning ability might be thought conceptually analogous in certain respects to that of fitness as employed in evolutionary theory. Subsequently, I discovered that my cross-world measure of earning ability bears some resemblance to the account of fitness as 'dispositional property' that is advanced by the philosopher of science Robert N Brandon in his *Adaptation and Environment* (Princeton University Press, 1990).

81. See Kaplow, *supra* note 19.

(iii) include only those projects with the highest ex ante expected rate of return in this valuation calculus, before discounting these figures by their appropriate interest rates and summing the results.

It should be clear that this is equivalent to using a (i) cross-world, (ii) objective, (iii) ex ante, and (iv) perfectly raw ('COAR'*)* tax's measure of potential earnings, appropriately discounted. Prospectively determined future cash flows under Kaplow's ideal income tax are therefore identical to potential earnings as retrospectively appraised by a COAR tax. This constitutes a considerable conceptual merit in favor of the cross-world measure, and shifts the burden of argument to a proponent of the intra-world approach to explain how our retrospective appraisal of earning ability could sensibly diverge from our prospective one.

2. Policy Objections to Cross-World Taxation

The previous section claimed that a cross-world tax's measure of potential earnings is superior to an intra-world measure from a conceptual perspective. In this section, however, I argue that the actual administration of retrospective cross-world tax faces several powerful policy objections, involving the tax's burdensomeness and revenue effects, that an intra-world regime would avoid. In light of this disconnect, the cross-world/intra-world distinction serves as perhaps the most dramatic illustration of the misalignment between the metaphysics of earning ability and economics of endowment taxation, and further exposes a deep-seated tension at the core of the ability tax program.

a. Counterfactual Talent Slavery and Cross-World Labor Burdens

An initial policy objection to cross-world taxation is that it will sometimes attribute a taxpayer an amount in probability-weighted potential earnings that they could not possibly have earned in the actual labor market, regardless of which choices they make (or fail to make) for how to develop and signal their abilities.[82] For instance, if a person's potential income were $1000 in possible worlds X and Y (which have different market conditions than the real world), $600 in world Z (which has the same economic conditions as the real world), and $400 in the actual world W, and if all four worlds were equally probable, the taxpayer's final potential earnings would be pegged at $750—a higher income than they could possibly make in either Z or W. At least at first blush, it may seem positively *unfair* to tax a person on income they could not conceivably have earned in the real world economy, irrespective of their efforts.

But if one accepts that the probability-weighted average of a person's cross-world income is the most comprehensive measure of true earning ability, one may

82. Professor Sugin seems to imagine cases bordering on this outcome when she warns against excessive taxation of high ability but low earning individuals who fail to achieve their income potential due to luck of the draw in a winner-take-all market. See Sugin, *supra* note 32 at 253-54.

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not be terribly perturbed by this initial result. If it is fair to sometimes reduce a person's potential earnings relative to their earning ability in the actual world[83] on the basis of counterfactual considerations about how their endowment would have monetarily functioned under an array of epistemically feasible alternate economic conditions, then by parity of reasoning, it should also be appropriate to sometimes increase this appraisal, perhaps even to amounts in excess of their intra-world earning capacity. These consequences flow from the fact that income is not just a function of one's choices, but also of the state of the world.

Although the prior criticism could be resisted in this way, a related though more resilient normative objection to cross-world taxation lies in the immediate vicinity. In worlds where a person's same-world income potential is very high ('*high-wage worlds*'), a taxpayer would not typically need to work an excessive number of hours in order to satisfy their taxes on this income if they worked at the highest paying job available. However, if income from counterfactual high-wage worlds is used to determine cross-world potential earnings that they are taxed upon in the real world, the taxpayer may have to *work a much greater number of hours in the real world in order to satisfy their tax liability on this cross-world income than they would have had to work had they been taxed on this income in those high-wage worlds themselves.* Let us refer to severe instances of such circumstances as '*counterfactual talent slavery*.'

Counterfactual talent slavery will arise where the taxpayer commands significantly lower wages in the real world than in the counterfactual scenarios to which this cross-world income is attributed. The trouble stems from the fact that, while cross-world taxation uses a person's *income* from counterfactual branch lines to determine their potential earnings, the corresponding number of *hours* that the person would have had to work to satisfy their tax obligations on this income in these worlds (their '*cross-world labor burdens*') do not exert a proportionate influence on the work obligations that taxation of this cross-world income generates for them in the real world. It is this asymmetry between the respective influences of (i) cross-world income and (ii) cross-world labor burdens on real world labor burdens that creates the possibility for enormous unfairness. To illustrate this phenomenon, consider the following example:

> ***Counterfactual Talent Slavery***: Suppose Taxpayer has potential hourly wages of \$200 in possible worlds *A*, *B*, and *C*, but of only \$125 in the actual world *W*. All four worlds are equally probable. Assuming an eighty-hour workweek endowment, Taxpayer's yearly income potential for each of worlds *A*, *B*, and *C* would be equal to: (52 weeks * 80 hours per week * \$200 hourly wages) = \$832,000. For the real world *W*, their income potential would be equal to: (52 weeks * 80 hours per week * \$125 hourly wages) = \$520,000. Under a cross-world regime, Taxpayer's final potential earnings would thus be: (\$832,000 * 75% probability of *A*, *B*, or *C*) + (\$520,000 * 25% probability of *W*) = \$754,000.

83. *Contra* Sugin, who also warns against reducing taxes on those who are lucky enough to gain a clear windfall in the actual world (e.g., a lottery winner). *Ibid* at 254.

> Assume a tax rate of 50% across all brackets. Under a cross-world regime, Taxpayer's tax liability would then be ($754,000 in potential earnings * 50% tax rate) = $377,000. If they work at the highest paying job they could obtain, it would take them ($377,000 in taxes/$125 real world hourly wage) = 3,016 hours per year to satisfy this tax liability.
>
> Now let's determine how many of these 3,016 hours are attributable to taxation of counterfactual income from worlds *A*, *B*, and *C*: this would be equal to (($832,000 in potential income at these worlds * 75% probability) * 50% tax rate)/$125 real world hourly wage) = 2496 hours.
>
> Yet had any of worlds *A*, *B,* or *C* turned out to be actual, and the Taxpayer was only taxed on their intra-world income in that world, they would have had to work only ($832,000 * 50% tax rate)/$200 hourly wage = 2080 hours in order to satisfy their tax liability.

Thus, our hero must work (2,496 - 2,080) = 416 *more hours* per year in the real world in order to satisfy their annual tax obligation on their counterfactual earnings from high-wage worlds *A*, *B,* and *C* than they would have had to work had they been taxed on just that income *in those worlds themselves.* This flows from the fact that our protagonist does not command as high wages in the real world as they do in *A*, *B*, and *C*. Consequently, taxing them on their cross-world income from *A*, *B*, and *C* generates a much larger work obligation for them in the real world than it would have had they been taxed on just this income in those relevant counterfactual scenarios themselves. While the income from these counterfactual worlds is used to generate their potential earnings, the work obligations that would have been created by taxation of this income in those worlds does not exert a proportionate effect on the work obligations that derive from taxation of this counterfactual income in the real world. It is this asymmetry that has the potential to generate gravely unfair consequences.

At this point in the game, a proponent of cross-world taxation may offer up a similar reply as before. Namely, they may insist that this structural feature cuts both ways. If those cross-world scenarios ('*low-wage worlds*') where a person's wages are lower than in the real world contribute to their total probability-weighted potential earnings, an individual will have to work *fewer* hours in the real world in order to satisfy their tax obligations on this cross-world income than they would have had to have worked if they were taxed on this income in these low-wage worlds themselves. If this latter result is deemed an acceptable consequence of the theory, then by parity of reasoning, situations involving counterfactual talent slavery must be permissible as well.

This avenue is certainly open to an advocate of cross-world taxation, but it is not a particularly attractive one. A large part of cross-world taxation's original appeal lay in its apparent tendency to reduce the influence of contingent facts about our own economy in appraising a person's raw earnings potential. But it is now clear that what the regime gives with one hand, it takes away with another. Namely, while cross-world taxation refuses to draw arbitrary lines around which epistemically feasible branch lines are relevant to the appraisal of earnings ability, it simultaneously introduces the effects of a higher-order form

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of contingency: in virtue of determining a person's real-world wages, contingent facts about our own economy will *also* dictate the magnitude of those work burdens incurred as a result of taxing a person on their cross-world income. Indeed, the incorporation of this high cross-world income into potential earnings serves to magnify the ill effects a person suffers as a result of the actual world's settling on a state where the individual earns low wages. For not only is the individual's ability to earn (and therefore to consume) directly compromised as a result of such developments, but those labor burdens attributable to taxation of their cross-world income are increased as well, thereby further reducing their effective wages.

When viewed in light of this higher-order contingency, the cross-world tax's 'cuts-both-ways' symmetry, previously touted as a virtue, actually reveals a thinly veiled and pernicious form of inequity. Specifically, it is *unfair* that some people should have to work more hours, while others less, to satisfy the tax obligations generated by their cross-world income, relative to their respective cross-world burdens in those worlds where the income is generated. Call this the '*problem of cross-world labor burdens*.' To the extent that the world's historical trajectory is (apart from the effects of a person's own choices) a morally arbitrary matter, this inequity appears no less objectionable than the original form of arbitrariness that cross-world taxation was hoping to avoid.

In particularly dramatic instances where a person's counterfactual wages greatly exceed their real world wages, the person's tax liability may surpass even their full intra-world earnings potential. In such cases, unless adjustments are made, the taxpayer would be destined to a life in debtor's prison through no fault of their own; the individual would tragically, and quite literally, be made a slave to their counterfactual talents. Though one could attempt to 'fix' these perverse results by reducing the individual's tax bill, the cross-world approach's tendency to generate such troublesome cases counts as a considerable strike against it. The need to employ an ad hoc device to maintain equity means that the regime is unable to track its desiderata without introducing emergent inequities of its own.

b. Cross-World Revenue Reduction

Furthermore, even if some accommodations were made in extreme cases of counterfactual talent slavery to assure that the State does not unjustly jail or penalize its citizens, such corrective measures would only aggravate another of the cross-world approach's afflictions: the possibility for a reduction in government revenue relative to an intra-world tax. This problem can be sketched as follows.

In instances where a person's cross-world income potential is less than their intra-world income potential, the person may be taxed on *less* than their actual earned income. In such cases, the cross-world tax leads to a reduction in tax revenue relative to an intra-world regime. Call the absolute value of this decrease '*D*,' and the type of scenario a '*D*-case.'

Conversely, in instances where a person's cross-world income potential is higher than their intra-world income potential, the person will necessarily be taxed on *more* than their actual earned income. In such cases, the cross-world tax leads to an increase in tax revenue relative to an intra-world regime. Call the value of this increase '*I*,' and the type of scenario an '*I*-case.'

As we've observed, however, in extreme *I*-cases a person may be unable to satisfy their entire tax liability, either in principle because their tax liability exceeds their total intra-world income potential, or at least without working a morally unacceptable number of hours. Because a portion of some people's tax obligations in *I*-cases will be legally unenforceable, the increases in tax revenue (relative to an intra-world regime) in *I*-cases may fail to completely offset the reductions in tax revenue collected by the government in *D*-cases. That is, total *D* may be greater than total *I*. If the two types of cases arise with *equal frequency*—a reasonable default assumption—the government would tend to take in less total tax revenue under a cross-world regime than under an intra-world regime.

To illustrate this phenomenon, consider the following numerical example:

> ***Cross-World Revenue Reduction***: Suppose that individuals *A* and *B* each earn \$200,000 per year, and that this represents their maximum earnings capacity in the real world *W*. Further suppose that a cross-world tax is in effect, and that there are three counterfactual worlds *X*, *Y*, and *Z* in play, each with different market conditions than the real world. In each of these worlds, *A* can earn \$50,000 (which is \$150,000 less than their real-world potential) and *B* can earn \$350,000 (which is \$150,000 more than their real-world potential). At time T_1, each of these worlds had a 30% probability of occurring, while the real world had a 10% chance of coming to pass. *A*'s potential earnings are therefore equal to: (\$50,000 * 90%) + (\$200,000 * 10%) = \$65,000, while B's potential earnings are equal to (\$350,000 * 90%) + (\$200,000 * 10%) = \$335,000.
>
> Now assume a 60% tax rate across all brackets. *A*'s taxes would then be (\$65,000 * 60%) = \$39,000. *B*'s taxes would be (\$335,000 * 60%) = \$201,000. Thus, *B*'s taxes exceed their real world earning potential by \$1,000. The State would have to reduce B's taxes by *at least* this amount (and potentially far more, if it wanted to relieve *B* of de facto servitude). Total revenue intake from taxation is therefore \$39,000 from *A* plus \$200,000 from *B*, yielding a total of \$239,000.
>
> Compare this result to what would have occurred under an intra-world regime. Because they are both working at their maximum intra-world earning capacity, *A* and *B* are taxed on actual earnings of \$200,000 each. Total government revenue from taxation would equal (\$400,000 * 60%) = \$240,000.
>
> Relative to an intra world regime, the government would *lose at least \$1,000 in revenue* by adopting a cross-world raw ability tax. This is the direct result of the unenforceability of part of *B*'s tax obligations under a cross-world tax.

While this may not seem like a very large loss, if this pattern were sufficiently common, such deprivations would quickly accumulate to produce sizeable reductions in aggregate revenue. Admittedly, there would need to be either quite large discrepancies between cross-world and intra-world incomes or very high tax rates in order to generate cases where a person's tax liability strictly exceeds their total intra-world earning potential. However, if in order to ameliorate the problem of

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counterfactual talent slavery the State set a maximum number of hours that a person could legally be required to work in order to satisfy their tax obligations, and further agreed to reduce any tax liabilities that generate work obligations in excess of this threshold, this revenue reduction effect would become much more significant. *The lower this designated ceiling, the greater the revenue reduction that would result*. We see then that in order to mitigate the unfairness produced by counterfactual talent slavery, the State would be forced to compromise its own fiscal health and accept progressively greater revenue losses.

IV. The Problems Diagnosed: Two Sources of Instability for Endowment Taxation

A. The First Dilemma: Potential Earnings—Metaphysics versus Economics

In section III.D.iii, I argued that the probability-weighted average of a person's cross-world income is the most conceptually principled measure of earning ability and potential income. But as a matter of policy, it's equally clear that the administration of a cross-world tax would create grave problems. Because the work obligations generated from the taxation of cross-world income are dictated by one's actual wages, rather than those wages that one enjoys in the worlds where this counterfactual income is generated, cross-world taxation has the tendency to lead to inequitable labor burdens and counterfactual talent slavery. It may also cause a reduction in aggregate government revenue relative to an intra-world regime. Efforts to mitigate the former set of troubles by curtailing a person's taxes, in order to save them from jail time or undue hardship, will tend to aggravate the latter.

This is perhaps the most dramatic illustration of the virulent tension at the very core of the endowment tax paradigm that I have attempted to document throughout this Article, and which threatens to cleave the program in two: the metaphysics of earning ability and the economics of its taxation are not in alignment. This misalignment can be traced to a common cause. As discussed above, ability and potential are inherently modal notions,[84] and earning ability is best characterized as one type of 'dispositional property,' whose characteristics are only manifested under certain background conditions. From this, I've argued that the more principled a measure of a person's earning ability we hope to achieve, the greater the amount of certain sorts of counterfactual data we will have to incorporate into our appraisal. This might be done in at least three ways, which I shall refer to as the *Threefold Path*:

1. By making the tax more raw, and thereby pushing back the time T_1 at which we stop holding the taxpayer's actual life history fixed;

84. For a survey of the general philosophical literature on abilities, see John Maier, "Abilities" in Edward N Zalta, ed, *The Stanford Encyclopedia of Philosophy* (Fall 2014 ed), online: https://plato.stanford.edu/archives/fall2014/entries/abilities/.

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2. By holding the taxpayer to standards of rationality which are progressively more stringent (i.e., objective) than a purely subjective standard;
3. By considering a greater number of epistemically feasible branch lines after T_1 in which market conditions diverge from the real world, and taxing their cross-world income from these worlds.

Furthermore, we have seen that at least in the case of raw ability taxes (1) and objective ability taxes (2), the incorporation of certain counterfactual data is also required to create an efficient incentive structure.

Here, though, is the rub: a tax's burdensomeness and revenue effects will generally be a function of prevailing—as opposed to hypothetical—circumstances. This is because these actual (rather than hypothetical) facts fix a person's actual wages, which determine their labor burdens from taxation and capacity to contribute to the State's coffers. It follows that the more robust our measure of potential earnings, the greater the possibility for generating emergent perverse results. This is the essence of the Misalignment Argument.

The preceding section III.D.iii focused on cross-world taxes (3) and the concomitant problems of counterfactual talent slavery, cross-world labor burdens, and cross-world revenue reduction. As we progressed through our typology of different conceptions of potential earnings, I also exposed analogous problems for the other forms of endowment taxation considered earlier on.

With respect to (1), I showed in section III.B that as an endowment tax becomes more raw, it becomes a more comprehensive measure of endowed earning ability (and also does a better job of eliminating substitution effects and the impact of brute luck), while concurrently aggravating the problem of talent slavery proper. In the limit, a perfectly raw tax would even lead to what I called absolute talent slavery.

With respect to (2), I argued in section III.D.ii that use of an (at least partially) objective standard of rationality was needed to preserve the luck egalitarian's conceptual distinction between option luck and brute luck, as well as to create an efficient incentive structure. However, as one moves from a subjective standard to a hybrid standard or weak objective standard, and ultimately to a strong objective standard, one will be forced to attribute greater hypothetical earnings to the taxpayer at each turn. While this attribution is needed to preserve our conception of the agent's free will and to promote certain efficiencies, it simultaneously opens the door to increasingly inequitable tax burdens.

Finally, while ex post taxation does not add *more* counterfactual data than ex ante taxation—and therefore has not been included in our Threefold Path—it arguably reflects a person's true 'maximum potential earnings' in a particular branchline. However, this also gives rise to those inequitable and inefficient results discussed above at section III.D.i. This constitutes a similar problem of misalignment between metaphysics and economic impact.

A key result has herein been demonstrated: talent slavery, counterfactual talent slavery, and servitude to objective standards of rationality are all *specific*

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instances of the more general problem of misalignment between the metaphysics of earning ability and the economics of its taxation. The endowment tax partisan thereby faces an *initial dilemma*: to avoid these unsavory consequences, they must forswear (or at least heavily dilute) the most conceptually principled measures of potential earnings, which also often flow naturally from the ability tax's underlying policy motivations and promote certain efficiencies. In particular, they must repudiate a highly raw, cross-world, objective, and ex post tax in favor of one that is substantially cultivated, intra-world, ex ante, and which employs a relatively weak standard of rationality.

B. The Second Dilemma: Monetizing Endowment—Prospective versus Retrospective Taxation

Earlier, I observed that the future cash flows employed by Kaplow's ideal Haigs-Simons income tax is equivalent to a cross-world measure (the one used by the COAR tax, to be precise), which weights possible future states of the world by their respective probabilities of occurrence.[85] In light of this equivalence, one might wonder whether this regime would also fall prey to the misalignment problems discussed above and, if not, then why? As with many issues in taxation theory, the key here is timing: Kaplow's tax does not lead to these same problems when administered *prospectively* at birth, rather than *retrospectively*, as with those taxes we have been considering.

At the time of prospective administration, scenarios where the taxpayer goes on to earn greater wages than they later actually command in the real world would not yet have been pruned from the tree of future possibilities. To borrow from the language of physics, the taxpayer's probability function has not yet collapsed into a discrete eigenstate. Accordingly, because these scenarios are still *live* future possibilities, an individual could theoretically[86] monetize them for net present value, thereby providing themself with the liquidity needed to meet their tax obligations.

Conversely, at the time of retrospective application of a cross-world tax, this monetization opportunity is no longer available, since many of these scenarios would have since been churned by the march of time from future potentialities into foregone irrealities (though they would remain valid counterfactual possibilities). As such, they are worthless to the market and provide no source of value to the taxpayer.

Scenarios that meet this fate of being prospectively but not retrospectively monetizable would track the Threefold Path and include: (a) cross-world scenarios where epistemically possible divergences in the economy would have permitted the taxpayer to command greater wages than in the real world; (b) earning opportunities that a wholly rational agent seeking to maximize return

85. That is, an ability tax that is cross-world, objective, ex ante, and perfectly raw. See section III.D.iii, above.

86. But see section III.A, above, for reasons why, in practice, this may be practically infeasible.

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from the taxpayer's capital would have taken advantage of but that the taxpayer fails to recognize; and (c) investments that the taxpayer could have undertaken if they were solely interested in maximizing earnings, but that they avoid due to competing leisure preferences. These situations correspond to those earning scenarios taxed by cross-world, objective, and raw ability taxes, respectively.[87]

Now from the perspective of luck egalitarianism, it is quite natural that the temporal pruning of high-wage worlds in (a) should give rise to some form of inequity, such as the problems of counterfactual talent slavery and cross-world burdens. Apart from the effects of the taxpayer's own choices, which path the world takes on and which branchlines the taxpayer can subsequently monetize is clearly a matter of *brute luck*. Accordingly, it would seem unfair to make counterfactual earnings corresponding to forgone high-wage worlds the object of backwards-looking taxation.

By comparison, when a cross-world tax is applied prospectively, the effects of this brute luck are eliminated, since whether or not the taxpayer chooses to monetize these high-wage worlds is still (at least theoretically) a matter of option luck. Yet, as discussed above in section III.A, in practice a taxpayer would be compelled to monetize these branch lines in order to obtain the liquidity required to meet their tax obligations. Thus, although prospective administration of a cross-world tax avoids the problems of brute luck associated with retrospective taxation, it requires the taxpayer to *forfeit the entirety of their option luck* for navigating their academic and professional career.

The endowment tax theorist is thus caught in a *second dilemma*. While prospective taxation requires the taxpayer to forfeit their option luck, retrospective taxation gives rise to inequities attributable to brute luck. If the endowment tax theorist is to avoid the former set of troubles, then they must embrace the latter, or vice versa.

V. Conclusion: The Trilemma Revisited

Let me summarize the main lessons from this Article. In section I, I examined common arguments for and against the endowment tax. I concluded there that, although there are strong considerations to be offered both for and against ability taxation, it seems that none of these is decisive. In this Article, I have developed a novel line of objection to endowment taxation. In particular, I have argued that once we appreciate how 'earning ability' and 'potential earnings' are properly understood and appraised, we should reject the endowment tax as unduly burdensome and unfair to certain classes of taxpayers.

I began this task by attempting to make precise what one might mean by a person's 'potential earnings.' Accordingly, I constructed a typology of different endowment tax instruments, each of which tracks a distinct measure of potential

87. Further note that those scenarios in (b) and (c) would generally be prospectively monetizable because the market will tend to be more rational and return-oriented than the individual taxpayer.

earnings. Distinctions were drawn between ability taxes that are: (i) prospective versus retrospective, (ii) cultivated versus raw, (iii) ex post versus ex ante, (iv) subjective versus objective, and (v) intra-world versus cross-world. In the course of surveying these regimes, their differing conceptions of potential earnings, and their respective strengths and weaknesses, I diagnosed two sources of instability at the very core of the endowment tax program.

First, while the retrospective inclusion of greater amounts of counterfactual data (via the Threefold Path) generally makes one's appraisal of earning ability more robust and sometimes produces a more efficient incentive structure, it concurrently generates its own set of problems, including talent slavery, counterfactual talent slavery, and servitude to objective standards of rationality. This is because the burdensomeness and revenue effects of a tax will be a function of prevailing rather than hypothetical states of affairs. I claimed that these three phenomena (as well as the problems associated with ex post taxation) are all specific instances of the more general problem of misalignment between the correct conceptual analysis or metaphysics of earning ability and the economics of its taxation.

Second, we saw that any ability tax that pays deference to liberalism's autonomy and neutrality principles must be administered retrospectively rather than prospectively, lest the tax lock the taxpayer into a single career trajectory and deprive them of the opportunity to experiment and discover their own personal conception of the good. But at the time of retrospective administration, the taxpayer is no longer able to monetize those counterfactual scenarios that have since become foregone irrealities. Thus, while prospective taxation requires the taxpayer to forfeit their option luck, retrospective taxation leads to inequities attributable to brute luck, such as counterfactual talent slavery and unfair cross-world labor burdens.

Together, these two sets of considerations, each presenting its own dilemma, give rise to the following Trilemma: an endowment tax theorist must accept:

(i) A prospective endowment tax, and accept the tax's violence towards liberalism (assuming an inability to translate future income into an ability to pay does not first undo the whole enterprise); or
(ii) A watered-down form of retrospective endowment taxation (such as a largely cultivated intra-world tax employing a weak standard of rationality), and acknowledge that the regime relies upon a conceptually dubious appraisal of earning ability, is sometimes inefficient, and often unattractive on its own terms; or
(iii) A conceptually principled and counterfactually robust retrospective tax, and begrudgingly accept its concomitant problems of talent slavery, counterfactual talent slavery, and servitude to objective standards of rationality.

I have argued that none of these three prongs is particularly inviting. Accordingly—and in contrast to the increasingly popular view among economists, tax scholars, and philosophers—because these tensions afflict endowment

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taxation even granting idealizing epistemic and administrative assumptions, they serve to detract from the regime's overall appeal as a theoretical ideal or normative benchmark against which we might measure the desirability of more practicable real world proposals. Thus, my recommendation is this: pick one of those possible worlds with which the endowment tax is so concerned, and leave the tax there.

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Appendix: Numerical Illustration of Certain Ability Taxes

The following numerical example is intended to illustrate the mechanics of the six forms of ability taxation described in section III.C of this Article.

> ***Degree Planning***: At time T_1, Taxpayer is deciding whether to obtain Degree *A* or Degree *B*. The two educational programs are of equal duration and cost no tuition. As a result of macroeconomic uncertainty, there are two epistemically possible states that the world could be in upon the Taxpayer's graduation at time T_2. An Ideal Reasoner with access to all the same information as the Market would assign a 75% chance of Scenario 1 materializing, and a 25% chance of Scenario 2 coming to pass.
>
> While a wholly rational agent in Taxpayer's circumstances would subjectively assign these same epistemic probabilities to the two scenarios, Taxpayer incorrectly evaluates the available evidence and judges that the probabilities are reversed—that is, Taxpayer believes that Scenario 1 has a 25% chance while Scenario 2 has a 75% chance of occurrence.
>
> Taxpayer knows that in Scenario 1 individuals with Degree *A* would be able to earn up to $150,000 a year and those with Degree *B* could earn up to $100,000 per year, while in Scenario 2 individuals with Degree *A* would be able to earn up to $100,000 a year and those with Degree *B* could earn up to $200,000 a year.
>
> As the cookie happens to crumble, Scenario 2 comes to pass at T_2, and those with Degree *A* end up capable of earning $100,000, while those with Degree *B* end up capable of earning $200,000.

Let us first consider what Taxpayer's potential earnings would be under the three intra-world regimes.

Under an **intra-world ex post** raw ability tax, Taxpayer is attributed $200,000 of potential earnings per year. In light of actual economic developments (that is, in light of Scenario 2's having materialized), it turns out that obtaining Degree *B* would have maximized taxpayer's present earning ability under actual market conditions, as it would have allowed them to earn $200,000. We therefore attribute Taxpayer potential earnings of $200,000.

Under an **intra-world objective ex ante** raw ability tax, Taxpayer is attributed $100,000 of potential earnings per year. This follows from the following two-step calculation. First, we note that a wholly rational agent in Taxpayer's situation would have determined that obtaining Degree *A* had a higher expected return on investment than Degree *B* ex ante. This is because, at T_1, Taxpayer's expected wages from Degree *A* equal: (75% * $150,000) + (25% * $100,000) = $137,500, while their expected wages from Degree *B* equal: (75% * $100,000) + (25% * $200,000) = $125,000. Second, because those individuals who possess Degree *A* (the more promising degree, ex ante) can now earn $100,000 in the present market, we attribute Taxpayer potential earnings of $100,000.

Under an **intra-world subjective ex ante** raw ability tax, Taxpayer is attributed $200,000 of potential earnings per year. This follows from a two-step calculation. First, given their incorrect beliefs about the relevant probabilities, at T_1, Taxpayer

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believes that Degree *B* has a higher expected return than Degree *A*. More specifically, Taxpayer believes that the expected wages from Degree *A* equal: (25% * $150,000) + (75% * $100,000) = $112,500, while the expected wages from Degree *B* equal: (25% * $100,000) + (75%* $200,000) = $175,000. Since those individuals who possess Degree *B* (the degree which Taxpayer, given their actual sub-rational capacities, believed to be the more promising degree ex ante) can now earn $200,000, we attribute Taxpayer potential earnings of $200,000.

Now let us consider what Taxpayer's potential earnings would be under the three cross-world regimes.

Under a **cross-world ex post** raw ability tax, Taxpayer's potential earnings are equal to: (75% * $150,000) + (25% * $200,000) = $162,500. This amount was arrived at by (i) determining how much Taxpayer could have earned in both Scenario 1 and Scenario 2, respectively, had they taken those steps that, in fact, would have maximized their income in each such world, and then (ii) discounting these amounts by their corresponding scenario's probability of occurrence. Thus, had Scenario 1 come to pass, Taxpayer could have maximized their earning potential in that world by acquiring Degree *A*; they would have then been capable of earning $150,000 in Scenario 1. Similarly, had Scenario 2 occurred, Taxpayer would have maximized their earning potential by obtaining Degree *B*, which would have permitted them to earn up to $200,000. We then multiply these amounts by Scenarios 1 and 2's respective probabilities (i.e., 75% and 25%) and then sum the results to determine the taxpayer's final probability weighted potential earnings.

Under the **cross-world objective ex ante** raw ability tax (i.e., the COAR tax), Taxpayer's potential earnings are equal to: (75% * $150,000) + (25% * $100,000) = $137,500. As previously determined in our discussion of the intra-world objective ex ante regime, at T_1 a wholly rational agent would have determined that Taxpayer's expected income from obtaining Degree *A* is greater than their expected income from obtaining Degree *B*. Thus, to calculate potential earnings under a cross-world objective ex ante regime, we first figure out what Taxpayer could have earned in both Scenarios 1 and 2 had they acquired Degree *A*. In Scenario 1, they could have earned $150,000 had they obtained Degree *A*. In Scenario 2, they could have earned $100,000 had they obtained Degree *A*. We then multiply these amounts by Scenario 1 and 2's respective probabilities of occurrence to arrive at our final potential earnings of $137,500.

Under a **cross-world subjective ex ante** raw ability tax, Taxpayer's potential earnings are equal to: (75% * $100,000) + (25% * $200,000) = $125,000. As previously determined in our discussion of the intra-world subjective ex ante regime, given their incorrect beliefs about the relevant probabilities, at T_1 Taxpayer believes that Degree *B* has a higher expected return ex ante than Degree *A*. Thus, to calculate potential earnings under a cross-world subjective ex ante regime, we first determine what Taxpayer could have earned in both Scenarios 1 and 2 had they acquired Degree *B*. In Scenario 1, they could have earned $100,000 had they obtained Degree *B*. In Scenario 2, they could have earned $200,000 had they obtained Degree *B*. We then multiply these amounts by Scenario 1 and 2's respective probabilities of occurrence to arrive at our final potential earnings of $125,000.

In sum, our six taxes yield the following appraisals of potential earnings:

- Intra-World Ex Post: $200,000
- Intra-World Objective Ex Ante: $100,000
- Intra-World Subjective Ex Ante: $200,000
- Cross-World Ex Post: $162,500

- Cross-World Objective Ex Ante: $137,500
- Cross-World Subjective Ex Ante: $125,000

Or, as a table:

Types of Raw Ability Taxation	**Ex Post** (decisions which, in fact, would have maximized earnings)	**Objective Ex Ante** (decisions which a wholly rational agent would have determined maximized expected earnings ex ante)	**Subjective Ex Ante** (decisions which the individual would have determined maximized expected earnings ex ante)
Intra-World (same economic conditions as real world)	$200,000	$100,000	$200,000
Cross-World (all epistemically possible economic conditions)	$162,500	$137,500	$125,000

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