Death and the Transfiguration: The Ideas of Turgot and Faustmann

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Death and the Transfiguration: The Ideas of Turgot and Faustmann

Mason Gaffney

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This is a story of the ideas of an 18th Century Frenchman, A.R. Jacques Turgot, and a 19th Century German, Martin Faustmann. Their bones were buried, like all, and their ideas lost two voices. Yet the ideas were born again, and again. They always will be, because they illumine and solve universal and ongoing economic and human concerns.

I. Turgot

Anne-Robert Jacques Turgot was an outstanding public servant , economic philosopher and social reformer in 18th Century France. He first made his mark as Royally-appointed Intendant of The Limousin, encompassing Limoges, 1761-74. An intendant enjoyed considerable latitude and autonomy, although few chose to use it as aggressively and constructively as Turgot did, for that was hard work and might interfere with traditional graft and sensual amusements. Limousin was a district of poor soils; most tenants were sharecroppers (metayers). Turgot observed the incentive structure closely, and later wrote on it concisely, anticipating by two centuries some findings of Gale Johnson and Steven Cheung.

Turgot was a friend of Vincent de Gournay, prominent capitalist entrepreneur and sometime Intendant of Commerce for all of France. Thus Turgot learned to appreciate commerce and industry, as well as agriculture. He was friendly with François Quesnay and his group called “Physiocrats”, but remained independent of them, to scout their cult-like tendencies and their overemphasis on agriculture and other extractive industries. Turgot saw that industry and trade were also productive, and devoted himself to encouraging them.

In Limousin he abolished the mandatory corvée, (roadwork in lieu of taxation). He improved roads by other means like taxing the lands they served. He was offered advancement to jurisdictions more favored by nature, but he conscientiously refused, in order to complete his reforms in Limousin. His Results were impressive. Kaolin was found near Limoges, and its ceramics (Havilland China) grew famous. It is plausible and likely that Turgot’s economic reforms fostered the growth of this industry.

In 1774 the new King Louis XVI made Turgot Comptroller-General for all France. Turgot set about removing interprovincial trade barriers, which he perceived as a major barrier to French prosperity. He coined the term Laissez-faire (Laissez faire, laissez passer, le monde va de lui-même). There is a touch of Chinese Taoism in Turgot. He also set about reforming the tax system, subjecting the previously exempt lands of the 1st and 2nd Estates to forms of property taxation. This was in the spirit of the Age, the Age of Enlightenment (Science, Art and Letters, Philosophy), and Benevolent Despotism. It was appropriate for France, the most advanced and sophisticated nation of Europe, to lead the way.

These jolting changes set off alarm bells, however, among the leaders of the First and Second Estates. They epitomized their reaction in their notorious Rémonstrance against the six edicts of Turgot (1776), containing some of the most reactionary postulates imaginable, so as to seem today like a satire that a Swift or Voltaire might have forged to mock them. They enlisted the new Queen, Marie Antoinette, to their cause. King Louis XVI was filled with good intentions, but wilted under this pressure and replaced Turgot, first with Necker and then Calonne. These advanced token reforms but without the needed energy and conviction, for the Geocracy was strong, entrenched and self-righteous. Necker and Calonne thus simply paved the way to July 14, 1789. Turgot, meantime, retired to the country and died peacefully in 1781.

While Intendant of Limoges he published his *Reflexions sur la Formation et la Distribution des Richesses* (1766). This short, compact work contains much of the essential wisdom that Adam Smith soon was to popularize and expand with *The Wealth of Nations* (1776). Turgot stressed the important roles of capital, and free markets. He favored letting the market determine interest rates – not from dogma, but from observing the results of John Law's ruination of French banking in 1720. He favored combating poverty by relieving the poor of taxes, while raising revenues instead from taxes on the value of land – including lands traditionally exempt or undertaxed. Smith visited France in 1766 and consulted extensively with Turgot, a man whose practical turn of mind made him a congenial tutor for Smith.

Of course, many of America's "Founding Fathers" visited France around the same time, and learned from Turgot, Quesnay, and the sect that gathered around Dr. Quesnay who had been installed at Versailles as physician to Madame Pompadour, influential mistress to Louis XV. One could even consider this Frenchman to have himself been one of our Founding Fathers. The Commerce Clause of the U.S. Constitution did for the new U.S.A. exactly what Turgot had tried to do for France, it guaranteed free trade among the states. For a long time it also prevented states from using excise taxes to raise revenue, forcing them back on the property tax, just as Turgot recommended for France. Some noted American visitors included Franklin, Jefferson, Paine, Madison, Monroe, Adams, and others. Growing American hostility to England meant growing friendship with France, and the American Revolution plus the ascendancy of Jefferson sealed a long Franco-American friendship and alliance.

It was also, of course, the Age of Reason, and the flowering of Enlightenment and Science. Turgot, like Quesnay, admired the work of William Harvey on the circulation of blood. Where Quesnay drew up his complex Tableau Economique (aka "Les Zig-zags" by ladies of The Court) Turgot simply wrote that investing is "the beneficial and fruitful circulation that animates all the work of society, …" – thus capturing the basic idea of modern macro-economics, in much simpler language than usually imposed on readers.

Smith's *Wealth of Nations*, a relaxing chatty read full of history and examples, eclipsed the skeletal language of Turgot; Turgot's Reflexions sank into relative obscurity. Smith, meantime, was forced to make Turgot's points in much less direct language, dependent as he was on his patron, the Duke of Bucchleuch, one of the biggest, if not THE biggest, landowner in Great Britain. Smith also depended on the friendship of "Champagne Charlie" Townshend, author of the "Intolerable Acts" and other excises that Britain sought to impose on the American colonies. By the time of our Revolution Turgot was dead and largely forgotten. Other Frenchmen like P.S. DuPont, Quesnay's disciple, and LaFayette, a non-intellectual romantic, Albert Gallatin, a transportation planner, Audubon, an ornithologist, and even Jean LaFitte, a pirate, gained more renown in America. Alexis de Toqueville, a patronizing French aristocrat whose writings flattered Americans' image of themselves, was very popular.

However the spirit of Turgot rose from the grave – call it Tod und Verklarung (Death and Transfiguration) - during the Progressive Era, in the work of Henry George, the American land reformer. Like Turgot, George favored raising revenues by taxing the vast lands of "The Robber Barons" in order to relieve workers and merchants from taxation. George even dedicated one of his books, Protection or Free Trade? (1886), to Turgot, and founded a movement that helped lower American tariffs and raise

American property taxes and put more stress on the land portion of real estate tax valuations.

1917, however, was the high point of Turgot's revival. The Great Red Scare succeeded in ending the Progressive Era in America. Since then property taxes have steadily fallen, step by step. Excise taxes, that Turgot hated so, have returned as state sales taxes, unknown before about 1931 (Gaffney, 2000-a; Mikesell, 2000; Gaffney, 2000-b). A highly regressive payroll tax, equivalent to the old corvée, has become our largest Federal revenue source, swamping out the corporate income tax, the estate tax, and now even edging out the personal income tax, which is still at least slightly graduated nominally (but not really, if you allow for the 15% cap on capital gains and dividends, the total exemption of imputed property income, and the effective exclusion of most income from renting out real estate). America has become a Geocracy again, as much as France was under its Ancien Régime. That that may surprise many readers is a measure of how thoroughly property interests have captured and dominate modern media and higher education, too. If Turgot is to rise again, it will have to be the work of our generation and the next. Let us hope for a peaceful transition, as in The Progressive Era, unlike the French, Russian, Chinese, and other Revolutions when "ignorant armies clashed by night".

II. Martin Faustmann

Faustmann was a German forester of mathematical bent. In 1849 he published a short tract with a long German title that we might freely translate as "When to cut a tree". Basically his answer was, when it stops growing fast enough to earn interest on its own embodied capital, plus rent on the land underneath it. He also showed that this was the way to maximize the annual rent of the land, or Bodenrente, and the value of the land in perpetuity (Bodenerwartungswerte), through an infinite chain of cycles. He also showed this is the way to maximize the net value of a "going concern", or "normalized" forest, with ages staggered from one to maturity (a demonstration also found later in Wicksell, who applied it to wines first, and then to whole economies).

Faustmann's Formula became a footnote in the forestry literature, where it was generally dismissed as being too mathematical, or too theoretical, or too abstract, or too severe, or too something, anything a forester could use to dismiss it. Professional foresters simply did not like it because it provided a way to show that the use of land in forestry could often not compete with other uses that yielded quicker and more frequent returns, not just in the short run but sustainably over time – infinite time.

Meantime professional economists, wrestling myopically with the same problem, never consulted the forestry literature, and came up with a variety of wrong solutions. Some like the U.S. Forest Service said aim for the "culmination of mean annual increment" (CMAI), which ignores the time value of money in the trees, but maximizes the annual return to the land if one can ignore interest costs. Others like Irving Fisher and R.G.D. Allen said cut the tree when its growth rate falls below the rate of interest, ignoring the cost of holding the land. Austrian economists like Menger, supposedly obsessed with their "period of production" as exemplified by timber, and surrounded by German foresters, never heard of Faustmann or his ideas. The one economist to take heed was Bertil Ohlin, who derived the solution himself in 1921, but never consulted the forestry literature to discover Faustmann had scooped him by 70 years. Then, like Winston Churchill's man who stumbled across the truth, Ohlin got up and hurried on as though nothing had happened. Others like Kenneth Boulding said maximize the internal rate of return on the planting cost – a remarkably banker-like position for a man known as a green conservationist.

There were elegant variations on all these. Friedrich and Vera Smith Lutz said Faustmann's idea (they had another name for it) was right for individual trees, but wrong for normalized or staggered rotations. Some liked CMAI if you deduct planting costs; others would not deduct planting costs. Some said that the cost of planting a replacement tree should be treated as part of logging costs (the Hanzlik formula), thus letting it be expensed for income tax purposes. Powerful Senators and Congressmen from timberland regions (1/3 of the U.S. is timberland) promoted formulae designed to maximize income-tax benefits for timberland owners, have timber declared to be a "capital asset" with a lower tax rate, and planting to be a current expense deductible from ordinary income. In state capitols, timber interests got timber exempted from property taxes, substituting yield taxes much too low to be revenue-neutral. In several states, standing timber itself is exempt from property taxes, while the land under it is separately assessed using formulas written by the industry, or its cat's-paws in Schools of Forestry, designed to minimize the tax valuation of the land.

The most valid criticisms of Faustmann came from ecologists and the like ("tree-huggers" to the loggers), because Faustmann (like Ronald Reagan later) put little or no value on scenic beauty ("if you've seen one redwood, you've seen 'em all"). Watershed protection is finally getting more recognition as a relevant value. Wildlife habitat is a value. To many people, virgin forests are a religious experience (loggers sneer at these as "Druids"). Forests are also beloved by hunters, whose alliance with "tree-huggers" and "Druids" is an ironic marriage of opposites.

In 1957 this writer took advantage of a Ford grant, arranged by my Chairman Addison Hickman, to whom I am eternally grateful. I probed into the interesting question, "When to Cut a Tree?". I came up with what seemed to me a correct math solution, and prepared to claim it as my own. Prudentially, I first surveyed the forestry literature and discovered Faustmann had been ahead of me by about 108 years – but had been virtually ignored by foresters, and totally unknown to economists.

To my delightful surprise, my little monograph, crudely mimeographed as an Ag Experiment Station Bulletin in North Carolina, made a hit. A few economists appreciated it for what I meant it to be, a macro-economic metaphor showing the benefits of faster capital turnover, using forest management simply as an easily expounded example. I slowly learned, though, that its popularity had a different cause, partly a product of the stage of the business cycle. Many forest owners and their bankers were looking for new reasons to log faster, caring little or nothing for the causes I was pushing (the welfare of society by speeding capital turnover to maximize employment). I had unwittingly played into their hands, giving them a new tool to forward their case. John Walker, CEO of Simpson Timber Company, was especially enthusiastic, and modestly came up with improvements on my exposition.

Next thing I knew Bill Allen of UCLA, who had greeted my Faustmann idea so warmly in 1967, published a textbook (Alchian and Allen, 1972) falling back on the Fisher-Allen solution (this was R.G.D. Allen, not Bill) that I had refuted in 1957. I never asked him why, and this is not the place to speculate. Paul Samuelson, who had written in support of my Faustmann solution, forgot all about it when upholding his end of the Cambridge Controversy, although it could have helped him refute the "Reswitching" model. The sad fact is that Faustmann, after his Tod und Verklärung, was re-killed. Ideas may become chic when the stars are aligned, exploited for what good they might do special interests, then washed away with the trash – especially when they might be used to support raising taxes on land values or other property income.

This writer became persona non grata at Resources for the Future, Inc., in 1972. I was not without fault, but a sea of troubles beset me when it became clear that I was extending my forestry research into forest taxation, and uncovering the shocking undertaxation of American forest holdings, both as property and as income-yielding assets. I declined when a charming forest lobbyist offered to wine, dine, and entertain me on his yacht, but that was not enough. My then-employer, from that day to this, has listed some giant forest holders among its grantors. Problems overwhelmed me, out of proportion to my said faults. A leading forest economist from Yale wrote threatening to attack me in scholarly journals if I published my findings. Marion Clawson, a friend and role model to me, used my mathematics to condemn forest managers in the National Forest Service and the Bureau of Land Management, with never a peep against private forest managers. A Lincoln-Foundation grantee from Claremont Men's College attacked me on technical grounds in the Western Economic J. while the Editor of that Journal, whose office abutted his, refused to publish my reply.

Even more overt have been the recent experiences of Governor Bob Riley of Alabama, and Professor Susan Pace Hamill of the University of Alabama School of Law. Hamill is an activist Christian who also teaches tax law, and became conscientiously aware of how Alabama's highly regressive tax system violates biblical principles of social justice. Alabama is highly churched, so she and Riley joined forces to bring its tax system into line with churchly doctrines. They began with its forest lands, which are vast, and virtually untaxed. Many churches supported a Riley-Hamill Initiative, but many others, with the most money and influence, disappointed them, campaigning actively against and defeating their initiative.

New Hampshire State Legislator Richard Noyes, representing North Salem, was a conservative Republican who even supported the efforts of George H.W. Bush to sunset the capital gains tax, a cause dear to timber owners but not to me. At the state level, however, he pushed for a statewide tax on land values, consistent with his belief in making state governments work better. He did not target timberlands per se, and it is doubtful if his proposed tax would in fact have shifted the tax burden from cities and farms and summer resorts to timberlands. He never had a chance to find out, however, because the timber owners of New Hampshire, stirring up NRA lobbyists and hunters, took the lead in beating down his bills. The same is true in most states that have essayed statewide property taxes. To many moderns such taxes may appear novel and radical, but in fact in 1920 and before they were the mainstay of state-level revenues, not just of local revenues.

Dean Henry Vaux of the California State School of Forestry, Berkeley, in 1958 offered me an Assistant Professorship. I was not to ramble at will through the world of ideas, but to focus narrowly on the value of forest recreation – nothing about taxation. Vaux himself soon drafted California's Timber Preserve Zone (TPZ) Act, preempting forest land assessments from County Assessors and mandating use of a formula he worked out to assess forest land for taxation at about 10% or less of its true market value. Years later, when I had moved to U.C. Riverside, his son, Henry Vaux, Jr. played a key role in maneuvering to eliminate the entire Department of Economics, including my tenure – but not his. Hardly anyone but a few corporate CEO's would even know there was a TPZ were it not for UCLA Law Professor Donald Hagman, a property tax expert and reformer of renown among urbanists. Hagman's great career was cut short when he fell off a cliff while jogging through Mendocino County, the heart of redwood terroir.

One could go on from state to state, but the bottom line is that Faustmann's great contribution to economic analysis, dating from 1849, died for over a century, was transfigured and reborn for a brief career after 1957, only to die again after a second life of about 20 years. Now will it, like Jimmy Carter, be born again? That is a question for present and future generations to answer.

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