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# Econ Journal Watch

## Scholarly Comments on Academic Economics

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# The Chang-Kim-Park Model of Cointegrated Density-Valued Time Series Cannot Accommodate a Stochastic Trend

Brendan K. Beare<sup>1</sup>

[LINK TO ABSTRACT](#)

In their article “Nonstationarity in Time Series of State Densities,” published in the *Journal of Econometrics* in 2016, Yoosoon Chang, Chang Sik Kim, and Joon Y. Park—referred to hereafter as CKP—propose a model of nonstationary cointegrated dynamics for a time series of probability density functions (hereafter “pdfs”). The main novelty of their approach is that at each point in time, the value taken by the time series in question is not a point in finite dimensional Euclidean space but rather a function, in fact a pdf, which we can view as an element of an infinite-dimensional vector space. While this necessarily complicates some of the mathematics, at an intuitive level their model can be understood to be an infinite-dimensional version of the usual model of cointegration. CKP fit their model to a time series of cross-sectional distributions of individual earnings, and a time series of intra-month distributions of stock returns.

Unfortunately, the dynamic model proposed by CKP has a rather serious flaw: Any time series of pdfs that satisfies their assumptions must necessarily be stationary, aside from a deterministic component. In particular, a stochastic trend driving long-run variation in their time series of pdfs—the defining feature of cointegration—cannot be present within their framework. The problem arises

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1. University of California–San Diego, La Jolla, CA 92093.

from the nonnegativity property of pdfs, a property that turns out to be incompatible with the postulated form of nonstationarity.

To build some intuition for what is going on, suppose we have two independent and identically distributed (“iid”) sequences of random variables,  $(x_t, t \in \mathbf{N})$  and  $(y_t, t \in \mathbf{N})$ , which are independent of one another, with each  $x_t$  and  $y_t$  equal to 1 with probability  $1/2$  and equal to  $-1$  with probability  $1/2$ . Construct a third sequence of random variables  $(z_t, t \in \mathbf{N})$  by setting

$$z_t = a + b \sum_{s=1}^t x_s + y_t \quad (1)$$

for each  $t \in \mathbf{N}$ , for some constants  $a, b \in \mathbf{R}$ . It should be clear that the time series  $(z_t)$  is stationary (in fact iid) if  $b = 0$ , and nonstationary if  $b \neq 0$ . But what if I told you that each random variable  $z_t$  is guaranteed to be nonnegative? For  $z_t$  to be a nonnegative random variable we require that  $a \geq |b|t + 1$ . This can only be true for all  $t \in \mathbf{N}$  if in fact  $b = 0$ , and so we see that the requirement of nonnegativity forces  $(z_t)$  to be stationary.

The situation in CKP’s paper is more complicated than in the simple example just provided, but it is the same tension between nonnegativity and nonstationarity that leads to the problem with their model. The problem is obscured by the fact that CKP work with demeaned pdfs. Though a demeaned pdf need not be nonnegative, it must nevertheless be bounded from below by a function that integrates to minus one. We will see that this leads to the same problem.

What follows is necessarily somewhat technical. I encourage readers who wish to learn more about time series analysis in infinite dimensional spaces to consult the monograph of Denis Bosq (2000).

Let  $K$  denote a compact interval of real numbers, and let  $B$  denote the Banach space of Lebesgue equivalence classes of integrable real valued functions on  $K$  equipped with the norm  $\|f\|_1 = \int_K |f|$ . CKP’s time series is a sequence of pdf-valued random elements  $(f_t, t \in \mathbf{N}_0)$  of  $B$ , where  $\mathbf{N}_0 = \mathbf{N} \cup \{0\}$ . For each  $t \in \mathbf{N}_0$  we let  $w_t = f_t - E f_t$ , with the expectation operator  $E$  defined as a Bochner integral in the usual way. We may informally view  $E f_t$  as a pointwise Lebesgue integral  $E f_t(x)$  taken for each  $x \in K$ , though strictly speaking  $f_t(x)$  is not well-defined for fixed  $x \in K$  as  $f_t$  is a Lebesgue equivalence class of functions.

Let  $H$  denote the Hilbert space of Lebesgue equivalence classes of square integrable real-valued functions on  $K$  that integrate to zero, with inner product  $\langle f, g \rangle = \int_K f g$  and corresponding norm  $\|\cdot\|_2$ . CKP assume that  $(w_t, t \in \mathbf{N}_0)$  is a sequence of random elements of  $H$ . For  $t \in \mathbf{N}$  we let  $u_t = w_t - w_{t-1}$ . CKP assume that there is an iid sequence  $(\varepsilon_t, t \in \mathbf{Z})$  in  $H$  with  $E \|\varepsilon_0\|_2^2 < \infty$  and positive definite covariance operator  $\Sigma$  such that, for each  $t \in \mathbf{N}$ , we have

$$u_t = \sum_{k=0}^{\infty} \Phi_k(\varepsilon_{t-k}).$$

Here  $(\Phi_k, k \in \mathbb{N}_0)$  is a sequence in  $\mathcal{L}(H)$ , the space of bounded linear operators from  $H$  to  $H$ . The sequence of operators is assumed to satisfy the summability condition  $\sum_{k=0}^{\infty} k \|\Phi_k\|_{\mathcal{L}(H)} < \infty$ , where  $\|\cdot\|_{\mathcal{L}(H)}$  is the operator norm. Under this summability condition, CKP observe that a version of the Beveridge-Nelson decomposition applies: We have

$$w_t = w_0 - \tilde{u}_0 + \sum_{s=1}^t \Phi(\varepsilon_s) + \tilde{u}_t \tag{2}$$

for each  $t \in \mathbb{N}$ , where  $\Phi = \sum_{k=0}^{\infty} \Phi_k$ , and  $(\tilde{u}_t, t \in \mathbb{Z})$  is the stationary sequence of random elements of  $H$  defined by  $\tilde{u}_t = \sum_{k=0}^{\infty} \tilde{\Phi}_k(\varepsilon_{t-k})$ , with  $\tilde{\Phi}_k = -\sum_{j=k+1}^{\infty} \Phi_j$ .

**Proposition: Under the conditions just stated,  $\Phi = 0$ .**

Before diving into the proof of this Proposition, let's recall the very simple example used earlier to illustrate the tension between nonnegativity and nonstationarity. Compare equation (1) to the Beveridge-Nelson decomposition (2). We can think of  $z_t$  as playing the role of the demeaned pdf  $w_t$ , of  $a$  as playing the role of the initial condition  $w_0 - \tilde{u}_0$ , of  $b$  as playing the role of the operator  $\Phi$ , of  $x_t$  as playing the role of the innovation  $\varepsilon_t$ , and of  $y_t$  as playing the role of the stationary component  $\tilde{u}_t$ . Just as a nonnegativity condition on  $z_t$  forced  $b$  to be equal to zero in our simple example, the proof of the above Proposition will demonstrate that the requirement that  $w_t$  be bounded from below by a function that integrates to minus one—specifically, by the negative of  $E f_t$ —forces  $\Phi$  to be equal to zero.

**Proof of Proposition:** Each  $f_t$  is pdf-valued and hence nonnegative, so in view of the Beveridge-Nelson decomposition (2) we must have

$$w_0 - \tilde{u}_0 + \sum_{s=1}^t \Phi(\varepsilon_s) + \tilde{u}_t \geq -E f_t \tag{3}$$

for all  $t \in \mathbb{N}$ . Fix an arbitrary Borel set  $J \subseteq K$ . A consequence of (3) is that we must have

$$\frac{1}{\sqrt{t}} \int_J E f_t + \frac{1}{\sqrt{t}} \int_J (w_0 - \tilde{u}_0) + \int_J \frac{1}{\sqrt{t}} \sum_{s=1}^t \Phi(\varepsilon_s) + \frac{1}{\sqrt{t}} \int_J \tilde{u}_t \geq 0 \tag{4}$$

for all  $t \in \mathbb{N}$ . Consider the behavior of each of the four terms on the left-hand side of the inequality (4) as  $t \rightarrow \infty$ . The Bochner integral  $E f_t$  is nonnegative and satisfies  $\int_K E f_t = E \int_K f_t = 1$ , so we have  $0 \leq \int_J E f_t \leq 1$  and hence  $t^{-1/2} \int_J E f_t \rightarrow 0$ . Further, since  $\int_J (w_0 - \tilde{u}_0)$

–  $\tilde{u}_0$ ) and  $\int_J \tilde{u}_t$  are random variables whose law does not depend on  $t$ —the latter by stationarity—we have  $t^{-1/2} \int_J (w_0 - \tilde{u}_0) \rightarrow 0$  and  $t^{-1/2} \int_J \tilde{u}_t \rightarrow 0$  in probability. The central limit theorem for Hilbertian random elements (Bosq 2000, Theorem 2.7) ensures that  $t^{-1/2} \sum_{s=1}^t \Phi(\varepsilon_s)$  converges in law to  $Z$ , a Gaussian random element of  $H$  with covariance operator  $\Phi \Sigma \Phi^*$ , where  $\Phi^*$  is the adjoint to  $\Phi$ . It then follows from the continuous mapping theorem that  $\int_J t^{-1/2} \sum_{s=1}^t \Phi(\varepsilon_s) \rightarrow \int_J Z$  in law. Putting these results together with Slutsky’s theorem, we find that

$$\frac{1}{\sqrt{t}} \int_J E f_t + \frac{1}{\sqrt{t}} \int_J (w_0 - \tilde{u}_0) + \int_J \frac{1}{\sqrt{t}} \sum_{s=1}^t \Phi(\varepsilon_s) + \frac{1}{\sqrt{t}} \int_J \tilde{u}_t \rightarrow \int_J Z \quad (5)$$

in law as  $t \rightarrow \infty$ . Now,  $\int_J Z$  is a centered Gaussian random variable, so the only way that (4) and (5) can simultaneously be true is if  $\int_J Z$  has variance zero, so that  $\int_J Z = 0$  almost surely. That is,  $\int_K Z 1_J = 0$  almost surely, where  $1_J$  denotes the indicator function for  $J$ . This is true for every Borel set  $J \subseteq K$  so, appealing to the fact that every element of  $H$  is the limit of a sequence of simple functions on  $K$ , we have  $\langle Z, b \rangle = 0$  almost surely for every  $b \in H$ . Recall that the covariance operator of  $Z$  is  $\Phi \Sigma \Phi^*$ ; applying the definition of a covariance operator, we obtain  $\Phi \Sigma \Phi^*(b) = E(\langle Z, b \rangle Z) = 0$  for all  $b \in H$ , so that  $\Phi \Sigma \Phi^* = 0$ . Since  $\Sigma$  is positive definite, this proves that  $\Phi = 0$ . ■

With  $\Phi = 0$ , the random-walk component of the Beveridge-Nelson decomposition vanishes, and for each  $t \in \mathbf{N}$  we have  $f_t = w_0 - \tilde{u}_0 + E f_t + \tilde{u}_t$ . CKP’s time series of pdfs is thus the sum of a deterministic component  $w_0 - \tilde{u}_0 + E f_t$  (deterministic in the sense of being determined at time zero) and a stationary component  $\tilde{u}_t$ .

The flaw elaborated above with the CKP model derives from the fact that the usual  $L^2$  Hilbert space is poorly suited to handling pdf-valued random variables, an insight that has been noted in prior mathematical literature. The literature has developed suitable Hilbert spaces in which addition and scalar multiplication are defined such that they preserve the essential properties of pdfs (see, e.g., Egozcue, Díaz-Barrero, and Pawlowsky-Glahn 2006; van den Boogaart, Egozcue, and Pawlowsky-Glahn 2014; Petersen and Müller 2016). I thank Peter Phillips and Won-Ki Seo for pointing me to such references, and for very helpful discussions of how the structures developed therein might form the basis for more useful models of cointegrated pdf-valued time series. Further research in this direction is underway.

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## About the Author



**Brendan K. Beare** is Associate Professor of Economics at the University of California–San Diego. He has published a range of articles on theoretical and applied econometrics in outlets including *Econ Journal Watch*, *Econometrica*, *Econometric Theory*, the *Journal of Applied Econometrics*, and the *Journal of Time Series Analysis*. His email address is [bbeare@ucsd.edu](mailto:bbeare@ucsd.edu).

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# The War on Cash: A Review of Kenneth Rogoff's *The Curse of Cash*

Jeffrey Rogers Hummel<sup>1</sup>

[LINK TO ABSTRACT](#)

Central bankers and mainstream monetary economists have recently become intrigued with the idea of reducing or even entirely eliminating hand-to-hand currency. The most comprehensive defense of this proposal is Kenneth S. Rogoff's recent book *The Curse of Cash* (2016a).<sup>2</sup> Rogoff, a former chief economist at the International Monetary Fund and now a professor of economics at Harvard University, has for two decades been putting forward this idea, and it has already been partly implemented in some countries, particularly Sweden. *The Curse of Cash* is written in a way that is accessible to the intelligent layman but nonetheless incorporates sophisticated economic arguments, along with a wealth of fascinating facts. Rogoff qualifies his proposals with cautions and caveats. But even at its most careful and scholarly, his case for eliminating nearly all currency is, when not entirely mistaken, extremely weak.

Throughout the book, Rogoff confines the term 'cash' exclusively to paper money. In developed countries, he would phase out over a decade or more all large-denomination notes: in the United States, for instance, first \$100 and \$50 bills and then \$20 bills and perhaps \$10 bills. For small transactions, he would leave in circulation smaller-denomination notes, although he considers eventually replacing even these with "equivalent-denomination coins of substantial weight" to make them "burdensome to carry around and conceal large amounts" (2016a, 94, 96). To put this in perspective, \$1, \$2, and \$5 notes comprise less than 2 percent of the value of U.S. notes, or a little over 3 percent if we add in \$10 bills.<sup>3</sup> For less

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1. San Jose State University, San Jose, CA 95192. I have received helpful comments from David R. Henderson and Ross Levatter, but the usual caveat applies.

2. Among Rogoff's many other writings on this subject are Rogoff (2014; 2016b; 2016c).

3. If we add Treasury coins to both total notes and to the notes Rogoff would leave in circulation, those percentages rise to 5 percent and 5.3 percent respectively. For the data, see the Board of Governors of the Federal Reserve System's "Currency in Circulation: Value" (2017).

developed countries, Rogoff concedes that it is “far too soon” to “contemplate phasing out their own currencies,” yet still “there is a case for phasing out large notes” (2016a, 205).

Rogoff’s argument proceeds along two prongs. Because cash is widely used in underground economic activity, he believes the elimination of large-denomination notes would help to significantly diminish such criminal activities as tax evasion, the drug trade, illegal immigration, money laundering, human trafficking, bribery of government officials, and even possibly terrorism. Suppressing such activities, he contends, would have the additional advantage of increasing government tax revenue. The second prong of Rogoff’s argument relates to monetary policy. He believes that future macroeconomic stability requires that central banks have the ability to impose negative interest rates not only on bank reserves but on the public’s money holdings as well. Although Rogoff generally makes his case thoughtfully and with attention to obvious objections, he sometimes enlivens it with alarmist and strident rhetoric.

## The underground economy

In pursuing the first prong of his argument, Rogoff promises to demonstrate “that the overall social benefits to phasing out currency are likely to outweigh the costs by a considerable margin” (2016a, 8). But in reality, he significantly understates the social benefits of cash by essentially tossing off his hat as a positive economist to assume the role of an efficiency expert for the State. Starting off with a nice, brief survey of currency’s history, Rogoff then looks at the current size and composition of global currency supplies. As of the end of 2015, not counting U.S. currency held in bank vaults, there was roughly \$4,200 in cash per person in the United States, 80 percent in \$100 bills. *The Curse of Cash* reviews estimates of how much of that currency is held abroad: between 45 and 60 percent. Once Rogoff gets to discussing the underground economy in the United States, however, he several times conveniently omits this detail. For instance, when reporting on diary surveys that suggest only one in twenty adult consumers holds \$100 bills, he writes that this “is not quite the same as explaining why everyone isn’t carrying around at least 34 of them” (ibid., 51). But if most of the U.S. currency held abroad is in the form of \$100 bills, then he needs to explain only why U.S. residents seem on average to be holding around 12 of them. Although that is still a large amount, this omission illustrates just one of many instances where Rogoff slips into exaggeration.

No one denies that a lot of cash circulates within the U.S. underground economy, which is composed of both criminal activity and activity that is unreported but otherwise legal. Relying on IRS estimates of the legally earned but unreported

taxes in 2006 and extrapolating forward to 2015, Rogoff approximates a net tax gap of \$500 billion, of which at least half derives from cash transactions. By assuming that the elimination of most cash could close the entire gap by at least 10 percent, Rogoff puts the potential gains to the national government at \$50 billion annually (or less than 0.3 percent of GDP), along with approximately another \$20 billion gain for state and local taxation. He points out that “this calculation does not take into account the efficiency costs of tax evasion” (2016a, 61). But on the other side of the ledger, Rogoff does not mention the potential deadweight loss from taxing previously underground economic production. If he were really interested in doing a genuine welfare analysis, he would have given at least some consideration to the social costs of forcing what is productive unreported activity from a marginal tax rate of zero into marginal rates as high as 30 to 40 percent. Particularly revealing of this statist bias is a related aside where Rogoff mistakenly refers to legal tax *avoidance* through tax havens as tax *evasion* (*ibid.*, 66).

The relative size of the underground economy in other countries, whether rich or poor, is almost universally larger than in the United States. Here are some of Rogoff’s size estimates, as a percent of GDP, covering ostensibly only unreported activity that is otherwise legal: 7.1 percent for the U.S.; 9.2 percent for Japan; 10.6 percent for the UK; 12.3 percent for Canada; 15.3 percent for Sweden; 22.3 percent for Italy; and 28.9 percent for Turkey (2016a, 63). Indeed the high percentages for some of these countries (including developed countries such as Greece, Italy, Spain, and Portugal, to say nothing of less-developed countries) suggest that the underground sector is where a large fraction of their ordinary citizens live and survive. Rogoff concludes that the GDP “share of Europe’s shadow economy is more than double” that of the U.S. (*ibid.*), and he admits that this probably stems from higher tax levels and more burdensome regulation in Europe. But rather than reaching the obvious economic conclusion that the deadweight loss in Europe from inhibiting these activities would therefore be considerably larger than in the U.S., Rogoff instead touts “the benefits of phasing out paper currency” in Europe “in terms of higher tax revenues” (89).

When Rogoff gets to criminal activities such as illegal drugs, corruption, and human trafficking, he descends primarily into lurid anecdotes to buttress his claim that eliminating cash would curtail these activities.<sup>4</sup> But here again, the only reason that drug cartels generate such huge profits is that they provide products

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4. A more systematic study of the use of high-denomination notes in criminal activity (as well as in tax evasion) is Sands (2016). Like Rogoff, Sands extols the potential revenue gains for government but provides few estimates of how significant those gains would be, and when he does, the estimates are more limited in scope than Rogoff’s and the projected gains are smaller. For instance, looking at only the self-employment tax in the U.S., Sands projects a revenue increase of a mere \$10 billion. Sands also looks for some numbers about the magnitude of potential crime reduction but ultimately is forced to conclude

that supply something that consumers demand. Rogoff as an individual may paternalistically disapprove of such preferences, but Rogoff as an economist should at least include in his welfare analysis the lost consumer surplus from any further hindrance to serving those preferences. To be fair, he offhandedly mentions legalization of marijuana as a simpler approach for at least that part of the illegal drug trade, but he otherwise does not attach much weight to the enormous enforcement costs and human toll from ruined lives of the largely unsuccessful war on drugs.

Particularly bizarre are Rogoff's repeated casual references to illegal immigration as "exploitation of migrant workers" (2016a, 67, 74, 75). His extenuating affirmation that "countries have a sovereign right to control their borders" is scarcely relevant to any welfare analysis (*ibid.*, 75). And despite asserting that he "strongly favor[s] allowing increased legal migration into advanced economies" (76), Rogoff clearly taints as among the exploiters the employers that pay wages high enough to attract illegal immigrants, in spite of all the other obstacles illegal immigrants face. When he champions his scheme as "far more humane and effective" than "building huge border fences" (p. 2), he reveals his scant concern for the welfare of such immigrants. As for corruption and bribery, Rogoff admits that they are really serious only in poorer countries—precisely where he also concedes that a premature elimination of cash would have devastating economic consequences. Ending his analysis of criminal activity are sections on terrorism, counterfeiting, and the health hazards of disease transmission through currency, but he concludes that eliminating cash would have at best trivial impacts on any of these, in part because the last two are minor concerns to begin with.

The one major cost that Rogoff does take seriously is the lost government revenue from issuing cash, what economists refer to as 'seigniorage.' But here he plays somewhat of a bait and switch on his readers by comparing one of his estimates for annual U.S. seigniorage (0.3 percent of GDP) to the IRS estimate of the total level of tax evasion within the U.S. (2.7 percent of GDP) (2016a, 83), rather than to his own previously estimated tax gain from eliminating cash (which happens also to be 0.3 percent of GDP). By thus looking at the total federal tax gap of \$500 billion rather than a possible \$50 billion tax gain from eliminating cash, he asserts "that the potential gains from reducing tax evasion should *at least* offset the forgone costs of seigniorage" (*ibid.*, 89, my emphasis), an assertion he continues to repeat throughout the book.<sup>5</sup> Even if we take \$50 billion as merely Rogoff's lowest

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"there is scant empirical evidence" and "it is impossible to be definitive about the scale of impact on tax evasion, financial crime and corruption" (2016, 39, 43).

5. E.g., "I have also argued...that the entire amount of seigniorage revenue loss is likely canceled out by indirect benefits due to higher tax revenues from the underground economy" (Rogoff 2016a, 202).

guess, that still does not make close to reasonable his use of the \$500 billion tax gap for comparison. He himself pointed out that as much as half the total gap does not involve cash at all.

Moreover, as Rogoff goes on to explain, 0.3 percent represents annual lost seigniorage from only *future* increases in U.S. currency. But to phase out cash, the U.S. government would also have to replace *existing* currency with more government interest-bearing debt. Rogoff admits that “[i]f the US government had to issue bonds to buy back the entire supply of dollar paper currency, it could add more than 7% of GDP to the national debt” (2016a, 217). Adding this amount generates his highest reckoning of the combined *annual* cost of eliminating both existing and future U.S. currency: \$98 billion, or over 0.5 percent of GDP.<sup>6</sup> At one point he throws in a counter-example: if 50 percent of U.S. currency still remained in circulation it would provide the Federal Reserve and therefore the government with \$35 billion a year in seigniorage, as the remaining proportion of cash continued to grow at past rates (*ibid.*, 85). This scenario is peculiarly incongruous with Rogoff’s proposal, given that 80 percent of U.S. currency is in \$100 bills, which he wants to eliminate entirely, and that about 50 percent of U.S. currency is held abroad. Later he more realistically conjectures that only 10 to 20 percent of currency would remain in circulation (still considerably more than the 5.3 percent constituting all the other currently circulating coins and bills up to \$10, which Rogoff would not eliminate). Yet none of these further speculations reduce the lost revenue to an amount below Rogoff’s projected minimum tax gains from phasing out currency, even if we add his estimated \$20 billion gain to state and local taxes to his estimated \$50 billion gain to federal taxes.

True, other developed countries without a foreign demand for their currency have much lower rates of seigniorage than the U.S., such as Canada and the UK

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6. Rogoff’s derivation of this amount can be confusing. He correctly points out that “there are two ways to think of seigniorage in a modern context”: monetary seigniorage and opportunity cost seigniorage (2016a, 81ff.). Monetary seigniorage is the expenditure gain from the government issuing currency. Opportunity cost seigniorage is the ongoing interest the government would have had to pay if it had financed those same expenditures through issuing debt rather than currency. But in long-run equilibrium they are just two ways of estimating the same seigniorage, since the present value of the infinite stream of interest government does not have to pay on currency should equal the total value of the currency outstanding. Rogoff also properly excludes from his cost estimates that part of seigniorage arising from bank reserves, both because those reserves would not be eliminated by his proposal and because nowadays it is partly offset by the interest that central banks pay on reserves. But Rogoff appears to add the two ways of calculating the same number together when he states: “At a 4% average interest rate on debt and 2% percent inflation rate, a real burden of \$28 billion per year would be added to the \$70 billion a year that the government would forgo in monetary seigniorage for a total of \$98 billion per year” (*ibid.*, 87). What he in fact is doing is using “opportunity cost seigniorage” to determine the annual cost of substituting interest-bearing debt for existing currency and “monetary seigniorage” to determine the annual cost of no longer issuing more currency in the future.

(0.18 percent of GDP for both), and therefore government losses if those countries eliminated cash would be less severe. But for the United States at least, Rogoff has failed to make a credible case that his proposal to phase out most cash would create a net gain for the government, much less a net benefit for society overall. His promise that such tax gains will leave the government “in a position to collect less taxes from everyone else” (2016a, 217) turns out to be not only politically gullible but also at odds with some of his own estimates.

Seigniorage itself arises from an implicit tax on people’s real cash balances, with an associated deadweight loss. Yet the fact that people continue to demand and use hand-to-hand currency demonstrates that it still brings net benefits. (For the U.S., the only exception is pennies and nickels, which cost more to manufacture than their face value and therefore generate negative seigniorage.) After all, many alternatives to cash exist already—checks, debit cards, credit cards, Automated Clearing House transactions, mobile payment devices—and at the margin people are taking considerable advantage of them. In the future, entrepreneurs will undoubtedly come up with innovations and cost cuts that make these alternatives even more attractive. But to prematurely force people into digitized, electronic payments by eliminating nearly all cash, rather than allowing this transition to proceed through a spontaneous market process, would cause still another welfare loss from Rogoff’s scheme (White 2017).

Rogoff acknowledges “the world’s mountains of cash are not going to fade anytime soon, unless governments actively move to phase out paper currency” (2016a, 281). He also implicitly recognizes that the cost of such a transition is far from slight, when he advises that “any plan to drastically scale back the use of cash needs to provide *heavily* subsidized, basic debit card accounts for low-income individuals and perhaps eventually smartphones as well” (*ibid.*, 2–3, my emphasis). If the government takes the cheaper option, by merely providing 80 million free, basic electronic-currency accounts for low-income individuals, Rogoff puts the bill at \$32 billion per year. He tries to wave away this expense by again invoking inflated tax gains as well as alleged “collateral benefits in fighting domestic inequality” (99). But he realizes that even this subsidy might not be sufficient to make people abandon cash willingly. So he also toys with more “aggressive” coercive inducements such as setting “a date after which large notes expire” (95), restricting “the maximum size of cash payments,” or “introducing charges for very large deposits (or groups of deposits) of small bills” (115).

Only toward the end of *The Curse of Cash* does Rogoff get around to discussing how his proposal would affect those employing the approximately 50 percent of United States currency held abroad. He realizes that “some would argue that large U.S. notes are a powerful force for good in countries like Russia, where paper dollars give ordinary citizens refuge from corrupt government officials”

(2016a, 203). But he then goes on to claim, without citing a shred of quantitative evidence, that “for every case where dollar or euro paper currency is facilitating a transaction that Americans might somehow judge morally desirable, there are probably many more cases where they would not, for example, human trafficking in young Russian and Ukrainian girls to France and the Middle East” (ibid.). Even if this bold claim were remotely close to accurate, it would still ignore the poor outside the United States who rely on dollars. Would he have the U.S. government provide them with basic debit-card accounts or smartphones as well? And how could this even be accomplished in poor countries lacking adequate banking sectors?

Rogoff simply ignores negative effects on countries that have completely dollarized (Panama, Ecuador, El Salvador, East Timor, the British Virgin Islands, the Caribbean Netherlands, Micronesia, and several small island countries in the Pacific) or partially dollarized (including Uruguay, Costa Rica, Honduras, Bermuda, the Bahamas, Iraq, Lebanon, Liberia, Cambodia, and Somalia, among others), unless you count his oblique and curt dismissal of any “foreign policy argument” as “extremely dubious” (2016a, 203). He does mention the Zimbabwe hyperinflation and how the U.S. dollar helped bring that to an end, but then conveniently forgets about this episode when considering the impact on the rest of the world of eliminating all but the smallest denominations of U.S. currency. This is just another instance of Rogoff’s disdain for a complete cost-benefit analysis. As Pierre Lemieux, in a critical review of *The Curse of Cash*, succinctly puts it: “the economist venturing into normative matters would normally attach the same weight to a foreigner’s welfare as to a national’s” (2017, 51).

In fact, a full and complete welfare analysis might arrive at the opposite of Rogoff’s conclusion: there may be too little currency in circulation rather than too much. After all, government already biases people’s decision against use of paper currency with its monopoly, which generates seigniorage well above costs. Larry White (2016) has pointed out that “we can withdraw all the denominations that the Federal Reserve and the Treasury issue so long as we let competing private financial institutions issue dollar-redeemable notes and token coins in any denominations they wish.” Kurt Schuler (2001) has discovered that within the United States the legal restrictions on private banknotes have already been repealed inadvertently by Congress. In all likelihood federal authorities would come down hard on any bank that tried to take advantage of this unintended legal loophole, and the private minting of coins is still prohibited. Moreover, debit cards have made bank deposits nearly as easy to spend as banknotes once were. Yet if economists like Rogoff were more willing to promote such an enhancement of monetary freedom, rather than further restrict it, then as White states, “we will have a market test and not mere

hand-waving regarding which denominations are worth having in the eyes of their users.”<sup>7</sup>

## Negative interest rates

The second prong of Rogoff’s argument for phasing out currency is that it would facilitate imposition of negative interest rates. The idea that a negative return on money might sometimes be desirable is not entirely new. It dates back at least to the work of a German economist, Silvio Gesell, in the 1890s, and it was flirted with during the Great Depression by Irving Fisher (1933; see Champ 2008; Gatch 2009) and John Maynard Keynes (1936, 353–358). In its current incarnation, the potential need for imposing negative interest rates is grounded in New Keynesian macroeconomic theory. The reasoning is as follows. When an economy sinks into a depression, the central bank should stimulate aggregate demand by lowering interest rates. But if interest rates are already extremely low, in what is alternately termed the ‘zero lower bound’ or a ‘liquidity trap,’ central banks are constrained in their ability to do this.

Central banks can charge a negative interest rate on the reserves that commercial banks and other financial institutions hold as deposits at the central bank. Those of Denmark, Switzerland, Sweden, the Eurozone, and Japan, have already started to do so. The practice in turn puts pressure on the private banks to charge negative rates on their own depositors. If the monetary authorities push negative rates too far, however, the public can just flee into cash with its zero nominal return. Banks can also do the same by replacing their deposits at the central bank with vault cash. Elimination of cash would close off this way of avoiding negative rates, making negative rates truly comprehensive and effective.

The term ‘negative interest rates’ actually obscures somewhat the nature of what Rogoff contemplates. Reserve requirements on banks used to be common, but several central banks today—although not yet the Federal Reserve—have abandoned them, in part responding to the observation of economists that required reserves represent an indirect tax on banks, making them hold more non-interest earning assets than otherwise. So another way of thinking about negative rates on reserves is as a direct rather than indirect tax on banks. If the negative rates can be extended to the general public, they in effect represent a *direct* tax on the public’s cash balances, or more precisely monetary balances, since most cash would be gone. In fact, Rogoff frequently describes negative rates as a tax on money. The one exemption from this near-universal levy that Rogoff considers is for “accounts

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7. For how a system of competitive note issue would operate, see Selgin 1988.

up to a certain amount (say, \$1,000–\$2,000)” (2016a, 99). Inflation, of course, already imposes an *implicit* tax on real cash balances. Negative rates thus reverse the causal chain of traditional monetary theory, which focuses on the money stock. To the extent monetary expansion increases spending, it causes higher inflation with its implicit tax on money. Negative interest rates, in contrast, would directly tax money in order to cause increased spending with higher inflation. I explore the importance of this difference below.

Rogoff starts off his plea for negative rates with another exaggeration, stating that “the zero bound has essentially crippled monetary policy across the advanced world for much of the past 8 years” (2016a, 4). Yet when he gets to the meat of his analysis, he more cautiously concludes that “the rapidly evolving academic literature is far from unanimous in concluding that the zero bound is a big problem for conventional monetary policy” (*ibid.*, 135). We therefore need to address four questions about directly taxing money with negative rates. (1) Is the policy needed? (2) Will the policy work? (3) Is the policy more effective than alternatives for achieving the same goal? (4) Does the policy avoid additional downsides that would make it risky or dangerous? Rogoff deals in some detail with each of these questions, finding in the affirmative for all four. Let us see why his answers are largely unconvincing.

### Is the policy needed?

Are negative interest rates needed? If we take a long look back over the last three quarters of a century, even the most enthusiastic proponents of negative rates, including Rogoff (2016a, 118), can identify only three cases when negative rates arguably might have helped: the Great Depression, Japan’s lost decade, and the financial crisis of 2008. Also quite a stretch is Rogoff’s claim that the zero bound has “crippled monetary policy” ever since the financial crisis (*ibid.*, 4), merely because interest rates and inflation remain low and growth remains slow. Economists are far from having reached a consensus about the causes of these trends. Among the competing explanations, several of which *The Curse of Cash* discusses, the secular stagnation thesis of Lawrence Summers (2014; 2016) does leave room for a more expansionary monetary policy.<sup>8</sup> But those who contend that slow growth results from declining innovation, such as Tyler Cowen (2011) and Robert Gordon (2016), give monetary policy almost no role. And Steve Hanke (2014), applying the concept of regime uncertainty (Higgs 1997), suggests that the possibility that activist monetary policy might even be part of the problem (see also Calomiris 2017).

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8. For a compelling critique of the secular stagnation thesis, see Bernanke (2015b).

A more fundamental issue, however, is whether the zero bound constrains monetary policy at all. Allegedly very low interest rates make money demand so elastic that any increases in the money stock are locked up in people's cash hoards and banks' reserves, rather than being spent. Yet Ben Bernanke back in 2000, and again in 2002, looking at Japan's experience with low interest rates, pointed out that a central bank through merely increasing the monetary base can ultimately buy up everything in the entire economy—except that sometime before it has done so, people will certainly start spending and drive up inflation (Bernanke 2000; 2002; see also Selgin 2016g). This scenario is sometimes referred to as a 'helicopter drop,' and it supposedly failed to work when the Federal Reserve, under Bernanke's leadership, engaged in quantitative easing.

A close examination of the Fed's quantitative easing, however, discloses that Bernanke's policies never involved authentic monetary expansion. Because of concerns about inflation, as Bernanke (2015a) divulges in his memoirs, the Fed sterilized its bailouts of the financial system during the early phase of the financial crisis, selling off Treasury securities to offset any impact on the monetary base. When in October of 2008 the Fed finally orchestrated its large-scale asset purchases, it did so mainly by borrowing the funds, through a special supplementary financing account from the Treasury, through reverse repos, and most important, through paying interest on bank reserves for the first time (Hummel 2011; Beckworth 2015). When the Fed thus borrows the money that it then re-injects into the economy, it is not in any real sense creating new money.

Interest-earning reserves in particular encourage banks to raise their reserve ratios rather than expand their loans to the private sector. This newly implemented monetary tool (acting as a substitute for minimum reserve requirements) therefore ended up lowering the money multiplier at the same time the Fed was increasing the monetary base. Looked at from another angle, the Fed became the preferred destination for a lot of bank lending, borrowing with interest-earning deposits in order to purchase other financial assets. Almost the entire explosion of the monetary base constituted this kind of *de facto* borrowing. In this way, the later phase of Bernanke's policies transformed the Fed into a giant government intermediary that merely reallocates credit. Such financial intermediation can have no more impact on the broader monetary aggregates than can the pure intermediation of Fannie Mae or Freddie Mac. In short, quantitative easing hardly entailed "massive 'money printing,'" as Rogoff (2016a, 136) characterizes it (Hummel 2014a; Selgin 2015; 2016a; b; 2017).

Other central banks that dabbled in so-called quantitative easing did so later than the Fed and with similar impediments. The European Central Bank (ECB), being particularly concerned about inflation at the outset of the financial crisis, initially conducted an even tighter monetary policy than the Fed. Only with the

European debt crisis did the ECB in 2010 begin its first round of quantitative easing, at a time when it was still continuing its longstanding policy of paying interest on reserves.<sup>9</sup> When the ECB initiated its second round of quantitative easing in January 2015, it was applying negative rates, but only on excess reserves. And the ECB did not drop the positive interest on its required reserves to zero until March 2016 (ECB 2002; Bernhardsen and Lund 2015; Cœuré 2014). By then, the newly imposed Liquidity Coverage Ratio of Basel III had already gone into effect. The Liquidity Coverage Ratio is more complicated than reserve requirements, but it too can induce banks to hold more reserves than otherwise (Hummel 2015a; 2016). In sum, it is far from true that after the financial crisis drastic monetary expansion was tried and failed. Instead, it was not actually tried.

### Will the policy work?

Will negative interest rates work? As Stephen Williamson (2017), formerly at the St. Louis Fed, points out in a review of *The Curse of Cash*, the results of early trials with negative rates have not been promising: “the central banks that have experimented with negative nominal interest rates... appear to have produced very low (and sometimes negative) inflation.” But I agree with Rogoff; these early experiments have been too few and too tentative to provide definitive conclusions. They have been almost entirely confined to negative rates on bank reserves, and usually only excess bank reserves. The Bank of Japan even grandfathered in excess reserves acquired before the new policy with a positive return of 0.1 percent. To determine how well negative rates might work, we must take up more theoretical issues.

Rogoff believes that, with a few minor adjustments, “cutting interest rates in negative territory (e.g., from  $-1.0\%$  to  $-1.5\%$ ) works pretty much the same way as interest rate cuts in positive territory does (e.g., from  $1.5\%$  to  $1.0\%$ )” (2016a, 127). But on the contrary, this symmetry clearly does not hold at the operational level. To the extent that central banks affect interest rates in positive territory, they do so with open-market operations or their equivalent, resulting in changes to the monetary base and bank reserves. But the very reason the zero bound is considered a problem is that these tools presumably do not work as well, if at all, in negative territory. Negative rates, in contrast, can be imposed and managed simply by taxing bank reserves. They therefore require no concomitant open-market purchases or

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9. The most direct evidence about the ECB's past monetary policies is available on its website (2017). The page offers an interactive chart of the ECB's consolidated balance sheet, which displays the changing size of either ECB assets or liabilities over time. The page also has links to the ECB's “Annual Reports” and “Weekly Financial Statements.”

sales and therefore place no automatic market constraints on how far down the monetary authorities push negative rates.

At first glance, this operational asymmetry would seem to make taxing money more powerful than open-market operations. Yet the operational asymmetry between the two leads to an asymmetry in how they bring about changes in spending. Unlike open-market operations that affect the *supply* of money, negative interest rates affect the *demand* for money. They are designed to increase money's velocity. In contrast to constant money growth, which can generate *sustained* inflation, any increase in velocity induced by plunging into negative rates should have only a *level* effect, generating at best a one-shot rise in the price level. Admittedly, if the rate at which money balances are taxed continually rises, the central bank could in theory produce sustained inflation. But neither Rogoff nor other advocates of taxing money appear to have in mind a policy that continually pushes negative rates lower and lower.

This difference suggests that negative rates should have weaker effects than monetary growth. Rogoff expects that negative rates might need to be in place “for a year or even two” (2016a, 181) for them to achieve even this limited impact on spending. A sustained velocity boost does occur during hyperinflations, but that is only because the government, starved for tax revenue, continually increases the rate of monetary growth to maintain the real level of its seigniorage after each jump in velocity. Once monetary growth is under control, velocity boost always ceases. To be truly effective at bringing up the *rate* of inflation, rather than just an unsustained spending bulge, a negative-rate policy would likewise require accompanying monetary expansion. But if monetary expansion is doing the real work anyway, why is a tax on money needed at all?

There are other perspectives from which to challenge the efficacy of negative interest rates. Williamson in his review of Rogoff's book accepts the neo-Fisherian approach of John Cochrane (2014a; b; Williamson 2016), believing that “that central bankers have the sign wrong” (Williamson 2017). Invoking the long-run Fisher effect, in which higher expected inflation drives nominal interest rates up and vice versa, Williamson contends that a negative “nominal interest rate reduces inflation, even in the short run.”<sup>10</sup> I believe that the neo-Fisherians get the causality backwards—running from the nominal interest rate to the rate of inflation rather than the other way around—*except* in the very case of taxing money holdings, in which the negative rate can indeed be entirely divorced from what is happening to the money stock.

The confusions about the symmetry between positive and negative interest-rate policies, as well as the misconceptions about quantitative easing mentioned

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10. For critiques of the Neo-Fisherian approach, see Rowe (2016) and Sumner (2016).

above, stem from the current focus on interest rates as the sole target and indicator of central bank policy. As George Selgin (2016c) has incisively expressed it: “it seems to me that in insisting that monetary policy is about regulating, not money, but interest rates, economists and monetary authorities have managed to obscure its true nature, making it appear both more potent and more mysterious than it is in fact.”<sup>11</sup> However one ultimately resolves these captivating theoretical debates about the channels through which monetary policy actually works, they certainly call into question whether taxing money will achieve the macroeconomic goals that Rogoff prophesizes.

### **Is the policy more effective than alternatives for achieving the same goal?**

Are negative interest rates more effective than alternatives for achieving the same goal? One of the best parts of *The Curse of Cash* is its detailed examination of alternative ways of dealing with the zero bound (if only Rogoff had wielded the same skepticism with respect to his own scheme). I will not repeat his often penetrating assessments of forward guidance (another policy that, like negative rates, attempts to influence the demand rather than the stock of money), higher inflation targets, fiscal policy, Marty Feldstein’s plan to stimulate spending with a value-added tax, Silvio Gessel’s stamp tax on money, and the dual-currency schemes of Robert Eisler, Stephen Davies, Willem Buiter, Ruchir Agarwal, and Miles Kimball.

Although Rogoff by no means demonstrates that all these alternatives are worse than taxing money, he is persuasive that none is simultaneously attractive and effective. Forward guidance, for instance, is unobjectionable but not by itself very potent. I only strongly disagree with Rogoff regarding two additional alternatives he critiques: nominal GDP targeting and helicopter money. He does raise some transitional problems for targeting nominal GDP. But given Rogoff’s belief that central banks have become too wedded to inflation targeting, you would expect him to be more enthusiastic about nominal GDP targeting. It would make for a significant improvement in how central banks handle supply-side shocks, and indeed inflation targeting was one factor making responses to the financial crisis so muted.

My other dispute is with Rogoff’s understanding of Milton Friedman’s well-known thought experiment with a helicopter drop of money (Friedman 1970). In deference to today’s technology, Rogoff restyles this as ‘drone money’ and assumes

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11. See also Selgin (2016f) and Hummel (2017). Earlier, more popular presentations of the same argument are given in Hummel (2014b; 2013).

it requires “some other institutional change” (2016a, 155–156). What he essentially has in mind is coordination with fiscal policy. Bernanke (2016b), beginning with his papers on Japan, is actually responsible for this misinterpretation, because he coupled the projected monetary expansion with either a tax cut or some government expenditure to distribute the money. But Friedman in his classic chapter on “The Optimum Quantity of Money” never linked his helicopter drop with any fiscal initiative, nor is there any reason whatsoever that it has to be linked.

We noted above when explaining the apparent impotence of quantitative easing that, so long as the central bank expands the monetary base with newly created money rather than recycling funds through financial intermediation, it can eventually hit any inflation target it chooses. Although we can imagine circumstances in which the desired expansion would exceed the supply of Treasury securities available for open-market purchases, central banks can purchase and have purchased other financial assets or made other types of loans. The Fed has already purchased mortgage-backed securities, and other central banks have extended their acquisitions still more broadly, some even purchasing equities. Though far from ideal, such limited and hopefully temporary expansion of central-bank involvement in credit markets would be less invasive than an untested, all-embracing money tax.<sup>12</sup>

### **Does the policy avoid additional downsides that would make it risky or dangerous?**

Do negative interest rates avoid any additional downsides that would make them risky or dangerous? Although some (e.g., Fairless and Neumann 2016; Bernanke 2016a) have raised concerns over the impact of negative rates on lending generally and on the viability of such financial institutions as banks, pension funds, and money market funds, these concerns mostly derive from negative rates imposed only on bank reserves, with cash still widely available.

Far more complex is the ultimate world Rogoff envisions, with all but the smallest denominations of currency gone and therefore most money held as deposits at financial institutions or in some other electronic form. Presumably in this world the money tax would impinge on nearly all lenders and borrowers across the board, except those with small exempt accounts or who are holding the remaining cash and coins. No one to my knowledge has systematically worked out how financial intermediation would function in this world, either in the short or long run. It is even unclear whether nominal interest rates generally would turn negative. In the range of positive rates, lenders and borrowers respond to infla-

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12. Selgin (2016d) suggests a limited way of making open-market operations more flexible.

tion's implicit tax on cash balances by *raising* market-determined nominal rates. What is to prevent the same outcome from an explicit tax on money that is more akin to a near-universal service fee for deposit balances? This is a broad topic too daunting for this review, and outside of a few stray observations about how certain financial practices or institutions might adapt, *The Curse of Cash* does not take up the challenge.<sup>13</sup>

Rogoff does, in an unusual display of epistemic humility, offer an instructive analogy between policymakers who “wade deeper into negative interest rate territory” and a person “who ventures slowly into the water. ... As she wades in deeper,” she may “encounter sharp rocks, barnacles, and jellyfish” or be “swept out to sea by an underwater ocean current” (2016a, 175). But then Rogoff unaccountably proceeds to focus primarily on such secondary complications as the effect on central bank independence and monetary rules. He is particularly worried about undermining the independence of central banks. I can only reply that my hope is that the abolition of cash with negative rates would do just that. Whatever the current benefits of central bank independence, they pale in comparison to an unelected regulatory body having discretionary power to tax money. Surely such an encompassing tax, if it is imposed at all, should be under the control of the legislature.

The one deep theoretical complication Rogoff considers, primarily in an appendix, is whether a cashless economy would leave the price level indeterminate. The possibility was once raised by Neil Wallace (1981), in a conjecture about the role of legal restrictions in a fiat money regime, but Rogoff also brings into this discussion the fiscal theory of the price level and the frequently resurrected Chicago Plan for imposing 100-percent reserves on banks. He concludes, citing Michael Woodford's *Interest and Prices* (2003), that “price stickiness” will “allow the government to control inflation, even without having a currency to control” (Rogoff 2016a, 226). But Woodford's influential tome never discusses the impact of negative interest rates on a cashless economy. Instead his models assume that “it is infeasible to pay negative interest on currency” and that “an attempt to pay negative interest on central-bank balances would lead to zero demand for such balances” (Woodford 2003, 75 n.9).

All considered, it is hard to be consoled by Rogoff's almost self-contradictory complacency about negative rates in a cashless economy: “One's gut instinct is that shifting to electronic currency will be a fairly smooth process, though

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13. One avenue that may be worth exploring is analyzing a universal service fee on deposits as similar to the interest-rate caps on deposits in the U.S. prior to financial deregulation. Those operated like an explicit tax on deposits during high inflation. As they were phased out during the Volcker years, they assisted his disinflation by increasing money demand.

it is simply not possible to definitely rule out the possibility that it will upset social conventions and expectations and lead to an outcome that is quite different than planned. This is the kind of ‘known unknown’ that government must plan for in making a transition” (2016a, 227). This blasé reliance on government planning to resolve any unexpected difficulties brings us to our next subject.

## The public-choice dimension of a war on cash

Let us grant for a moment that the phasing out all but small-denomination notes would accomplish what Rogoff has failed to convincingly substantiate: that it would bring about not just a small but a marked reduction in crime, particularly bona fide predatory acts such as extortion, human trafficking, and violence associated with the drug trade. Would it still be desirable? Not necessarily. We first must consider the welfare of those who use cash for perfectly legitimate or benign reasons. We have already seen above that Rogoff does not come close to quantitatively estimating the welfare loss to these users of cash, except for his estimate of a minimum of \$32 billion to subsidize debit-card accounts for the poor, which we can take as the lower bound. But there are further political-economy considerations that go beyond a strict cost-benefit analysis. Even when gains appear to be greater than losses, we should still hesitate about policies that punish or severely inconvenience the perfectly innocent.

Lemieux (2016) trenchantly points out: “Criminals are probably more likely than blameless citizens to invoke the Fifth Amendment against self-incrimination, or the Fourth Amendment against ‘unreasonable search and seizures.’ ... But that is not a valid reason to abolish these constitutional rights.” These are necessary institutional constraints on State power, not just protecting the innocent but proscribing barriers that protect a free society more generally. And as Lemieux goes on to argue, the underground economy itself is another such constraint. “As regulation increases, more people—consumers, entrepreneurs, unfashionable minorities—move to the underground economy. Thus, government cannot regulate past a certain point.” Cash in other words enables people not only to escape harmful or misguided government intrusions, but also, in an indirect but effective way, to express their political concerns. As Frédéric Bastiat (1998/1850) put it: “The safest way to make laws respected is to make them respectable.”

Indeed, one could argue that the underground economy is often a more effective check on government abuses than voting itself. Voting encounters well-established free-rider problems, fostering rational ignorance about political choices, all of which is amplified by confronting voters with at best a packaged bundle of usually unrelated policies. The underground economy, in contrast, allows

citizens to focus their grievances on particular government interventions that they understand from firsthand experience. And the fact that the risk associated with their illegal transactions imposes a real cost dramatically demonstrates their genuine preferences, in stark contrast to pulling a lever or checking a box in a voting booth, which is virtually costless and inconsequential on an individual basis. Would alcohol prohibition in the U.S. have been repealed without widespread evasion by countless Americans? Would the U.S. be belatedly moving to marijuana legalization without the escape mechanism of the underground economy?

Harold Demsetz (1982, 119–123) recognizes this “equilibrating process” fostered by the underground economy. He describes it as a system of “internal checks and balances,” in which “current developments seem to be making underground sectors more important.”<sup>14</sup> Obviously none of these considerations excuse human trafficking and other forms of violence or brutality that are also within the underground economy. But as noted above, Rogoff offers no more than emotionally charged impressions about the magnitude of these acts compared to harmless or beneficial uses of cash, and even grants that “on the scale of global cash holdings, terrorism is a relatively minor factor” (2016a, 77). One should be very cautious about drastic government impositions that indiscriminately impinge on almost the entire population, no matter how deplorable the outrages they are intended to curb. Careful consideration should be given to alternative legal remedies that do not cast their web so widely. Yet judging from *The Curse of Cash*, Rogoff believes that as long as laws are on the books, every effort should be made to ensure they all are strictly and implacably enforced.

Rogoff’s faith in government is so strong that he evinces no discernible unease about the possible abuse of even his proposed interventions. To be sure, he cushions his proposal with qualifications and constraints. “The long timeline is intended to give people and institutions time to adjust and to help policymakers navigate unforeseen problems” (2016a, 9). He would leave in circulation small-denomination notes or coins (albeit without proposing any adjustment for their declining relative importance as inflation erodes their real value). He concedes that there just might be some threats to privacy: “When phasing out paper currency, the most fundamental and difficult issue is how to balance an individual’s privacy rights with the government’s need to enforce laws, collect taxes, and combat terrorism” (ibid., 100). Occasionally he exhibits some pro-market sentiments: his inclination to legalize marijuana; his favoring increased legal immigration; his proviso that “central banks just tiptoe into negative rates,” lest a “technical problem interferes with normal market functioning” (158); and his admission that negative rates are

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14. Elert and Henrekson (2017) go further, arguing that “evasive entrepreneurship” within the underground economy helps to bring about significant and desirable institutional innovations.

“no panacea” and no substitute for “market-friendly reforms” (196). Notice, however, that Rogoff is entirely willing to rely on policymakers to “navigate unforeseen problems.”

Now consider the battery of ancillary coercive regulations that Rogoff thinks might be vital to ensure the success of his proposal. In addition to the aggressive inducements to get people to turn in their cash already mentioned above (expiration date on large notes, restrictions on the maximum size of cash payments, and charges for very large deposits of small bills), Rogoff’s supplemental interventions include “a regulatory regime for cryptocurrencies [such as Bitcoin and Ethereum] that allows only relatively small anonymous transactions” (2016a, 214); “more forceful steps...to pull the plug on money market funds, which in the current environment remain a regulatory end-around” (ibid., 86); lowering cash limits on anti-money-laundering regulations (201); “stopping casinos from laundering wholesale quantities of euros” (201); redoubling of “efforts to discourage” prepaid cards “as an alternative for moving large sums anonymously” (97); and banning “large-scale currency storage” or imposing “a tax on storage over a certain amount” (160–161). Rogoff is also quite comfortable with the Swedish government’s requirement of “certified cash registers with a special control unit (black box) attached to the register” that “downloads all sales, and the data can be read directly (only) by the Swedish tax agency” (107).<sup>15</sup>

And if this barrage of interventions proves insufficient, Rogoff is certain that the government will be “vigilant about playing Whac-a-mole as alternative transaction media come into being” in order to make any alternative currencies “impossible for financial institutions to accept” and “difficult to use in ordinary retail establishments” (2016a, 9). He predicts that “[t]o the extent that new approaches to financial transactions are developed to evade government efforts to root out their sources, they will be met with a stiff hand” (ibid., 214). After all, “it is hard to stay on top of the government indefinitely in a game where the latter can keep adjusting the rules until it wins” (208). Rather than considering this government capacity a chilling concern, Rogoff enthusiastically embraces it.<sup>16</sup>

*The Curse of Cash* appeared before India’s economically chaotic currency swap, in which Prime Minister Narendra Modi announced on November 8, 2016, that the country’s two highest denomination notes (the 500 rupee, worth about \$7.50, and the 1000 rupee, worth about \$15) would cease to be legal tender at midnight. In a move designed to reign in tax evasion, people were given slightly

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15. For an illuminating despite generally favorable personal impression of Sweden’s steps toward a cashless economy, see Heller 2016.

16. Selgin (2016e) makes the additional observation that Rogoff is oblivious to how regulations designed to inhibit market innovations that Rogoff doesn’t like could have the unintended consequence of inhibiting market innovations he would consider desirable.

less than two months to exchange these notes, with restrictions, for new ones. On the one hand, Modi's decree, which applied to 86 percent of the value of cash in circulation, was inconsistent with Rogoff's strictures that phasing out cash should be very gradual and that doing so was currently inappropriate for emerging economies. Nor was the experiment even a phaseout of high-denomination currency but instead an exchange, in which a larger 2000-rupee note was introduced. Nonetheless, India's experience should serve as a warning about potential government mismanagement and high-handedness. But Rogoff (2016d), in a blog post pointing out the inconsistencies with his own plan, praises the "motivation" behind India's approach, predicting that, despite "short run costs," the "long-run effects on India may well prove more than worth them." In other words, what does it matter if we break a few eggs; we are making an omelet. Here we begin to discern the elitist hubris of a central planner.<sup>17</sup>

The United States has already experienced the unfortunate consequences of two crusades to stamp out behavior considered by some to be illicit: alcohol prohibition and the ongoing war on drugs. These crusades have shared some of the same justifications that Rogoff employs for phasing out cash. Even nowadays, estimates are that alcohol is involved in about a third of violent crimes (Cannon and Carmona 2006, 7–8). And just as the war on drugs has extended outside the borders of the U.S., inflicting untold damage, Rogoff hopes the elimination of most cash will become an international campaign as well. What guarantees can he give us that his war on cash will not have results similar to those of these other crusades? When commenters have raised these objections, Rogoff dismisses them as cranks, offering crude caricatures of their fears: "some believe that phasing out currency will bring untold evil into the world," and others "believe that negative interest rate policy will undermine civilization" (2016a, 219). This is a bit uncharitable on his part, given his own overwrought rhetoric about crime and tax evasion. But more important, his dismissal is belied by the enormous range of discretionary powers he is so cavalierly willing to grant to the State.

## **Can central banks manage a cashless economy?**

*The Curse of Cash* takes up several additional topics that are somewhat tangential to Rogoff's arguments for phasing out cash and negative interest rates. I

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17. Wolf (2017) provides useful details about India's experiment but shares Rogoff's positive spin. For a compilation of critical perspectives, see Kapila 2017.

will treat only one of them: his biased account of the performance of the U.S. economy under the gold standard. He denounces “the idea that the gold standard produced spectacular stability” as a “fantasy and false image,” charging that the period “was punctuated by deep recessions (the recession of 1893 was in some ways almost as profound as the Great Depression of the 1930s)” (2016a, 193). Really? What ways were those? The National Bureau of Economic Research dates the 1893 recession as lasting only 17 months, as compared with 43 months to the trough of the Great Depression in 1933. The recent research of J. R. Vernon (1994) shows unemployment during the 1893 recession peaking at a little over 8 percent, compared with 25 percent for the Great Depression. Rogoff seems to have overlooked the work of Christina Romer (1986a; b; c; 1989), who has documented that less reliable data series from the gold-standard period have exaggerated the past volatility of the U.S. economy.

Admittedly the classical gold standard was not perfect. But neither is the long record of monetary policy under the Federal Reserve. Nearly all economists agree that the Fed exacerbated if not caused the Great Depression, when the U.S. was still on the gold standard, and it was responsible for the Great Inflation of the 1970s, when the dollar lost its last, vestigial link with gold. The Fed also contributed to the recession of 1937, in the midst of high unemployment lingering from the Great Depression. During World War I the Fed generated the highest rate of inflation in the country’s history—outside of the two hyperinflations of the American Revolution and the Civil War (in the Confederacy). This inflation was promptly followed by the U.S.’s highest annual deflation rate in 1920–1921, so severe that it makes the mild, benign deflation of the pre-Fed gold standard look like price stability by comparison. Then, during World War II, the Fed generated another inflation severe enough to inspire comprehensive wage and price controls and government rationing. And let’s not overlook the financial crisis of 2007–2008.<sup>18</sup>

Until the most recent panic during the financial crisis, affecting mainly investment banks and other components of the so-called shadow banking system, the period since the Great Depression has seen the elimination of contagious bank runs. But the timing suggests that this change owes more to the introduction of deposit insurance than to the Fed. Also worthy of note is the fact that bank panics, with their widespread temporary suspensions of cash payments, did not always result in major numbers of outright bank failures. Charles Calomiris and Gary Gorton (1991, 154) report the failure of only six national banks out of a total of 6,412 during the Panic of 1907, or less than 0.1 percent, and that was the panic that inspired the Fed’s creation in 1913. Since then, the economy has experienced

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18. For comparisons of the performance of the Fed and the pre-Fed gold standard, see Selgin 1997; Selgin et al. 2012; and Hummel 2015b.

two periods with significant numbers of bank failures unassociated with panics or depressions: the rural failures of the 1920s and the savings and loan crisis of the 1980s. During the pre-Fed period, the U.S. suffered outbreaks of numerous bank failures only three times: 1819–1824, 1839–1841, and 1890–1896. Thus, more such episodes occurred in the century under the Federal Reserve than in the century before, with the Fed presiding over the most serious case of all: again, the Great Depression.

In fact, there are only three periods during the entire century of the Fed's existence when one can plausibly claim that it performed satisfactorily: during the 1920s, when the price level was stable; during the low inflation of the long 1950s, despite its three garden-variety recessions; and during the two decades beginning in the mid-1980s, a spell whose low inflation and two minor recessions earned the sobriquet 'the Great Moderation.' Some critics would even question how satisfactory the Fed's record was during those three periods. By any objective standard, this is hardly an impressive enough record to generate confidence in the ability of the Fed, or any other central bank, to successfully administer either a cashless economy or negative interest rates. Yet nothing seems able to undermine Rogoff's credulous reverence for government management of the economy.

## Conclusion

*The Curse of Cash* is a well-written and engaging book with many intriguing claims and occasional insights. But in the final analysis, the book fails to demonstrate any bountiful gains from phasing out hand-to-hand currency in large denominations. Despite Rogoff's evangelical fervor, even his own estimates fail to definitively demonstrate any net increase in revenue for the U.S. government from such a major transition. Nor does he attempt a genuine welfare analysis of the underground economy, including the underground economy's important benefits as well as costs. Rather than provide a realistic assessment of whether the elimination of nearly all cash would actually constitute an improvement, he simply expects readers to automatically share his subjective distaste for most underground economic activity. As a result, he appreciably oversells any advantages from the his scheme and ignores or understates the extensive disadvantages.

I suppose Rogoff might have been able to argue successfully that coupling the phasing out of cash with negative interest rates might together enhance government revenue. But that is an argument he never makes, in part because he does not fully appreciate all the implications of the fact that negative rates would essentially entail a comprehensive tax on money holdings. His primary concern is with how negative interest rates could improve macroeconomic stability, but

here again he is unable to make a strong case that the policy is even needed, much less that it would work. Moreover, throughout his analysis he entirely ignores the public-choice dynamics of his proposal's myriad supplemental regulations, unreflectively adopting what Harold Demsetz (1969) characterizes as the “nirvana approach” to public policy. Rogoff remains willing to rely entirely upon the benevolence and foresightedness of policymakers, having apparently learned no cautionary lessons from the numerous and repeated policy failures of the past.

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## About the Author



**Jeffrey Rogers Hummel** is Associate Professor in the Economics Department at San Jose State University, where he teaches both economics and history. He received his Ph.D. in history from the University of Texas at Austin. He is the author of *Emancipating Slaves, Enslaving Free Men: A History of the American Civil War*. His email address is [jeff@jrhummel.com](mailto:jeff@jrhummel.com).

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## Response to Jeffrey Rogers Hummel's Review of *The Curse of Cash*

Kenneth S. Rogoff<sup>1</sup>

[LINK TO ABSTRACT](#)

I welcome Jeffrey Rogers Hummel's extensive and thoughtful review (2017) of my book *The Curse of Cash* (Rogoff 2016). Although I cannot agree with all his views, spins, and analyses, one can hardly complain about such a scholarly and informed discussion. A central aim of *The Curse of Cash* is to stimulate serious analysis and research on the role of paper currency in modern economies, an extremely important role that is largely ignored in modern macroeconomics.

*The Curse of Cash* looks at the history and future of cash (physical currency), exploring the facts and the theory, as well as the various strands of debate. The book also deals with issues arising from the zero lower bound on monetary policy, a fundamentally different but related topic—related because the bound arises precisely because paper currency is zero-interest government debt. This is not the place to give a point-by-point response to the perspectives Hummel offers, as I think readers will find most of it covered in the book itself. But I do think it useful to emphasize some points of clarification and interpretation, and perhaps also to push back in a few places.

Let's begin by noting that the very title of Hummel's piece, "The War on Cash," is itself a polemic exaggeration. It would be more accurate to say that the book is a war on big bills (which are of little significance outside the underground economy) in advanced economies, for that is obviously the point the book argues most strongly. The book does not argue for cashless society; in fact, it explains

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1. Harvard University, Cambridge, MA 02138.

why there is a need for leaving a physical currency around forever, and why any transition must be extremely gradual. The distinction between my proposal for a “less-cash” society<sup>2</sup> and a cashless one is fundamental, though it escapes many reviewers, who seem to believe that any change in the status quo (which, by the way, is inevitable) will lead to an Orwellian society. If advanced economies get rid of all bills, say, equivalent to \$50 and above over the next two decades, what exactly kind of activities will this prevent ordinary citizens from doing that they do now? The goal is to tackle wholesale tax evasion, crime, and corruption in advanced economies. The debate ought to be one of calibration, not of all or nothing. The book gives illustrative ideas, but is hardly rigidly wedded to a single approach, as it states in many places.

Importantly, *The Curse of Cash* is about the role of cash across *all* advanced economies, and not just the role of cash in the United States. As the book discusses in considerable detail, the case for pushing back on wholesale cash use is weaker for the United States than for most other countries, first because perhaps 40 to 50 percent of all U.S. dollar bills are held abroad, and second because the U.S. is a relatively high tax-compliance economy thanks to its reliance on income taxes for government revenue. The value-added taxes that many European countries rely on are in theory less distortionary from a public finance perspective, but that overlooks the fact they are much more easily evaded. That is why typical estimates for European countries of the shadow economy (mostly consisting of otherwise legal activities where proper taxes are not being paid) are far larger than for the United States, equaling over 25 percent of GDP in Greece and Italy, and roughly 15 percent in France and Germany, versus under 10 percent in the United States. The situation is far more extreme in developing economies such as India, where less than 2 percent of the population pays tax (Rogoff 2017a)—but the book is targeted at advanced economies with their far more developed financial systems. I do believe that even for the United States, the calculus of going to a less-cash society is still compelling, but the book highlights why other advanced economies will likely move first, as some indeed are doing. Using U.S. figures as an example in several places is a way of deliberately understating the case for most other countries.

Time frame and scope is a fundamental issue, and here many reviewers trip into deep exaggeration as a scare tactic for convincing readers that the status quo is perfect. Hummel has it right that my book argues for scaling back cash, not

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2. I use that exact adjective often in the book (2016, 9, 91, 98, 115, 173). In the first paragraph of the book’s preface, the proposal is described as “getting rid of most cash,” but, as becomes apparent, this refers to removing the high-denomination notes that account for the vast bulk of cash (in value terms) but that few ordinary people use in any of their activities, legal tax-compliant or otherwise (ibid, ix).

eliminating it, and there is a world of difference. Eliminating cash entirely would be a mistake for several reasons, especially for its impact on privacy. Timing is also important; Hummel again has it broadly right, but let me quote directly from the book:

[T]he speed of transition needs to be slow, stretching changes out over at least 10–15 years. Gradualism helps avoid excessive disruption and gives institutions and individuals time to adapt. It puts authorities in a position to make adjustments as issues arise and as new options become available. This is an important point; obviously, over any long course of transition, new technologies and new issues will arise, and any realistic plan has to acknowledge this possibility. (Rogoff 2016, 92)

Later, in the section “Variants,” the book states: “The proposal of this chapter should be viewed as illustrative only and can clearly be tweaked and changed in many dimensions, depending on the objective” (*ibid.*, 106). As for an ultimate move to coins only (which I throw out as a very long-run idea as technology continues to evolve), it should be clear that I have in mind a time frame on the order of half a century or more, if at all.

It is true that I give a ten-to-fifteen-year clock as a plausible baseline for a transition. Let’s remember, though, that this clock will only start ticking once a decision is taken, and no advanced democracy is likely to start down the less-cash road until after many years of discussion and analysis. Thus, the effective time scale is at least a couple decades in a world of ever-proliferating transactions technologies that are making cash less and less relevant in tax-compliant legal transactions. Cash now accounts for less than 10 percent of the value of retail transactions in the United States, having been 15 percent just a few years earlier, and is already under 5 percent in some countries (see Rogoff 2017a). Indeed, while cash is still the medium of choice for very small consumer transactions, it drops far down the list (behind debit cards, credit cards, electronic payments, checks, etc.) for expenditures of \$100 or more.

With rapid advances in cashless transaction technology coming on many fronts, it is a good bet that the use of cash in the U.S. in legal tax-compliant transactions will be well under 5 percent ten years from now and probably only 1–2 percent twenty years from now, and that is assuming no change in government policy on cash. At the same time, the use of cash (particularly large bills of \$50 or more, which constitute the vast majority of cash in most countries) is likely to remain robust, because of demand from the underground economy, which includes both otherwise legal activity that is engaged in evading taxes or regulations and outright criminal activities. For welfare analysis, this is an absolutely fundamental point, and I think most readers draw the obvious deduction. Cash has

pros and cons for society, but surely the balance is tilting, raising the question of whether it is time for recalibration.

Hummel prominently asserts that I do not give proper welfare weight to individuals and businesses who may be using cash to evade taxes, but are otherwise engaged in productive and socially constructive activities; that is, my welfare analysis fails to consider the value of the underground economy. I beg to differ. Of course, one should “have given at least some consideration to the social costs of forcing what is productive unreported activity from a marginal tax rate of zero into marginal rates as high as 30 or 40 percent” (Hummel 2017, 140). But a proper public finance perspective looks not at individual activities, but at the system as a whole. If some people are evading tax, others must pay more. Yes, it is true that government’s options will depend on how its overall revenues are affected by going to a less-cash society, including lost seigniorage, higher tax revenues from the shadow economy, lower costs of crime enforcement, and financial regulation (see the book’s discussion of why future revenues from government electronic currency could well far outstrip today’s revenues from paper currency). If overall government revenues do rise as I believe they will, the large majority of businesses will see their tax rate reduced.

In the section on “The Use of Cash to Facilitate Tax Evasion,” I write:

Tax evasion...creates what public finance economists call a “horizontal equity” problem. *When some people don’t pay the taxes owed on their true incomes, it means that other people—for example, law-abiding citizens with identical pre-tax incomes—have to pay more.* By the same token, if some firms use cash payments to get around anti-pollution regulations while others don’t, it gives the former an unfair competitive advantage and of course degrades the environment. When construction contractors use cash to employ illegal immigrant workers at low wages, they disadvantage both domestic workers and other construction firms that hire only legal workers and keep all payments out in the open. In addition to its distributional implications, tax evasion also hampers the efficiency of the tax system. What does that mean? If taxes can be avoided more easily in cash-intensive businesses, then too much investment will go to them, compared to other businesses that have higher pre-tax returns but lower post-tax returns. (Rogoff 2016, 59, italics added)

This public finance perspective seems to me the right way of looking at things. By the way, one cannot disregard the corrosive effects on society caused by the way cash allows a significant percentage of individuals and businesses to evade tax, and how this undermines citizens’ sense of fairness.

At one point, Hummel approvingly quotes a review saying that any economist wanting to do normative analysis should “attach the same weight to a for-

eigner's welfare as to a national's" (Lemieux 2017, 51; quoted in Hummel 2017, 144). Really? The Federal Reserve and U.S. Treasury, not to mention U.S. Congressional decisionmakers, certainly do not directly take into account foreign welfare. The long-established approach to studying international trade and finance issues has always assumed that national authorities take into account national welfare, and that coordination and cooperation are needed to achieve a global social optimum. This is the right way to think about the problem, and my discussion is completely consistent with it. We can separately debate whether the international welfare spillovers from foreign use of the U.S. dollar and the euro paper currencies are positive or negative, and of course the book does this. Let me only summarize by saying that while there are many reasonable uses of the \$100 bill abroad, it is indisputably popular with Russian oligarchs, Mexican drug lords, illegal arms dealers, Latin American rebels, corrupt officials, human traffickers, etc., and of course North Korean counterfeiters. In the book, I argue (conservatively) that foreign welfare should be thought of as a wash, but it is hardly ignored.

Hummel suggests that I exaggerate when I present the cost-benefit analysis of seigniorage versus other government revenue gains (and crime reduction). Of course, there are substantial uncertainties, but I generally attempt to overstate the seigniorage losses and understate the revenue gains and secondary benefits. (And let's set aside that I focus the most on the United States where, as already emphasized, tax compliance is relatively high and foreign holdings much more important.) My seigniorage calculations are based on the assumption that *all* cash disappears, but in fact since small bills are retained (whether the lowest be a \$10 or even a \$20), demand for cash will hardly go down proportionally to current holdings of \$100 bills and \$50 bills; there will be substitution into the less convenient smaller bills. As for whether the growth rate of cash will fall if large notes are removed, my guess is that it will be fairly similar from a smaller base since hoarding will still be important, and since cash needed for low-value transactions will still account for a small share of the stock. And by the way, I don't include at all the likely possibility that after years of outsize currency seigniorage due to exceptionally low interest rates and inflation, there is every chance that the demand will for currency will grow far below normal (or quite possibly shrink) as inflation rates and interest rates normalize. That is, there will quite possibly be years ahead where the Fed is soaking up dollars and earning negative monetary seigniorage on its cash business—which could prove politically awkward, although it shouldn't. If we instead assume a baseline where global real interest rates do not rise in coming years, the cost of carrying ordinary debt instead of cash will be very small (all this is in the book). Lastly, a point emphasized in the book, which Hummel does not discuss, is that there is every reason to believe that government profits from seigniorage on electronic currency instruments will rise significantly in coming

years. The growth will be greater if large-denomination notes are phased out, because bank reserves will increase, but regardless the likely future role of the government in electronic currency (if only for wholesale clients) could add dramatically to government seigniorage revenues.<sup>3</sup>

Second, in guessing that tax evasion would be reduced by 5–10 percent, I think I am being quite conservative, especially given IRS estimates of the share of tax evasion that derives from cash-intensive businesses, and experiences of other countries with finding ways to make using cash to evade taxes more difficult. Hummel again feels I am being biased when at one point, I mention that U.S. tax evasion accounts for close to 3 percent of GDP without saying for the umpteenth time that reducing cash usage will not eliminate all tax evasion; there is always a balance in writing any article about whether after stating an assumption *n* times, the reader requires it stated *n*+1 times.

Of course, other techniques such as recording of cash-register transactions can be brought to bear to reduce tax evasion through cash use. Hummel expresses discomfort with idea, but I see no reason cash registers should be any less subject to audit than other tax records.

It is true that I do not give any quantitative estimates of the welfare effect of reducing crime; that would be difficult given that there are no reliable estimates of the overall welfare cost of crime in general. But yes, my guess is that the benefits to the general public of reducing crime even by a few percent are quite significant in welfare terms, and even the government should in principle be able to save funds through lower law enforcement costs; obviously much of the benefit will be at the state and local level. The United States could certainly do more to collect information on the use of cash in crime, and the results of the United Kingdom's SOCA studies, discussed in the book, ought to be sobering. As the book emphasizes, there are many substitutes for cash in criminal transactions, but nothing is nearly as universally liquid or as widely accepted: There are good reasons why cash is king.

Hummel also gets exercised that I (twice) note that there are 34 \$100 bills for every man, woman and child in the United States, without each time reminding the reader that our best guess is that perhaps half (in the range of 14 to 20) of these are held abroad. Given how much the book talks about foreign holdings, it seems an exaggeration to say I am trying to exaggerate. In any event, the first occurrence of the 34 \$100 bills statistic occurs on page 3 before the book has had a chance to launch into its extensive discussion of alternative approaches to estimating foreign holdings of currency (one of my favorite sections, by the way). The second occurs

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3. For example, see the book's discussion of the "Chicago Plan" and its relation to electronic currency (Rogoff 2016, 86, 213–214).

shortly after the foreign holdings section, where I had thought the point should still be very fresh in the reader's mind. It arises in the context of surveys showing that 95 percent of people report to never holding any \$100 bills, with most of the rest claiming to hold only one or two on occasion. Just in case some reader has skipped to the page or forgotten the preceding discussion, I will add a qualifier in the second edition. Again, let's remember this is not a book just about the United States; large-denomination notes comprise the bulk of currency in value terms across all advanced economies, even the vast majority whose notes are almost entirely held domestically, and only a very small share is held abroad.

*The Curse of Cash* went to press in June 2016, well in advance of India's remarkable November 2016 experiment in demonetization. The newer paperback edition has a chapter that discusses India among other recent developments (Rogoff 2017a). Although the hardcover does give statistics for some emerging markets, and discusses some of the creative approaches to reducing cash use that India has taken, I do state that "for most [emerging markets and developing economies], it is far too soon to contemplate phasing out their own currencies" (2016, 204).

Negative rates, the topic of part II of the book, is a related but distinct issue. As the book emphasizes, it is perfectly possible to (A) phase out physical currency completely (which yet again I absolutely do not argue for), but at the same time install a regulation that prevents the central bank from (B) setting negative interest rates. So (A) does not have to imply (B). At the same time, the book discusses some clever ideas that have been proposed to engage in effective negative interest-rate policy without phasing out large bills or indeed making any effort to move to a less-cash society (this is another favorite part of the book for me). So (B) does not have to imply (A).

It is curious that Hummel is skeptical whether the zero bound will ever be a problem again, since in fact, the overwhelming view among central bankers and most monetary economists is that it remains a sword hanging over their heads (Rogoff 2016; 2017a; b). Hummel seems to confound the question of whether negative nominal interest rates might be needed in the next deep recession with various explanations of why real growth and real interest rates seem to be so low. Yes, there are manifold reasons for today's low real interest rates and these are discussed at length (again, a section I hope readers of the book find interesting). But the case for finding a way to decisively break the zero bound in monetary policy does not hang on whether the cause of today's low real rates is demographics, emerging markets' thirst for safe assets, slow productivity growth, et cetera. The case for freeing monetary policy from the zero bound is simply that there will inevitably be another deep recession or financial crisis. Given today's extraordinarily low general level of interest rates, it is quite likely that monetary policy

will again be paralyzed. Yes, there is academic debate about whether alternative instruments obviate the need for negative rate policy, and I try to present all the debate in a balanced way that is easy to understand. My read of professional opinion overall is that most economists, while appreciating all the various end-arounds central banks have tried, view these as only modestly effective, and that the zero bound is likely to be a major problem again sometime in the next couple decades, if not much sooner.

By the way, Hummel seems to suggest that helicopter money would do the trick if applied with determination. This view is a popular interpretation of some of Bernanke's early writings; but it is naive at best. For starters, helicopter money adds exactly nothing to the existing range of macroeconomic tools. It is simply a combination of fiscal policy and monetary policy, and countries such as Japan have effectively already done it, with very limited success. It is important to understand that the central bank does not have license to make transfers and, if it did, politicians would quickly rein in any semblance of independence. Of course, fiscal policy should be leaned on more heavily when monetary policy is paralyzed, but this is very much a second- or third-best solution with many well-known attendant problems. In an ideal world, monetary policy would be unfettered by the zero bound, and fiscal policy would support stabilization accordingly. Helicopter money, even if it were possible, is a second-best approach that cannot replicate the equilibria achievable with an optimal combination of fiscal and monetary policy (if negative-rate policy were feasible.)

Nor is the argument that negative interest rates are an administrative instrument, rather than a market-based instrument such as open-market operations, a terribly persuasive concern. There is a strong correspondence between using quantity and price instruments. There is already considerable experience with paying interest on excess bank reserves in many countries, even if the United States was a latecomer to this game (see, e.g., Bowman, Gagnon, and Leahy 2010). Although much of the experience has been with paying positive interest rates on reserves, the recent experience also includes negative interest-rate policy in Japan and Europe. By the way, it is important to emphasize that the transmission mechanism for negative rate policy to work does not require a banking system, as is easy to see in neo-Keynesian models with no banking sector, including literature cited in the book.

*The Curse of Cash* does cover a broad range of related issues which may seem tangential but are in fact either subtle and genuinely important (such as price-level determinacy, as analyzed in a technical appendix) or necessary to answer naive popular misconceptions. I am grateful that Hummel comments on some of this. For example, chapter 12 takes up the idea, popular in some circles, that the prewar gold standard era was a period of sheer monetary bliss. Gold standard

advocates tend to forget that the era was marked by recurrent financial crises and deep recessions worldwide. Hummel notes that the NBER dates the recession of 1893 as having lasted only two years. But as Carmen Reinhart and I (2014) emphasize, the NBER approach is not well tuned to deal with the kinds of severe recessions that tend to be associated with deep systemic financial crises, in part because recovery is so slow and in part because there are often ‘double dips’ as was in fact the case with the 1893 U.S. recession. But much more to the point is the fact that the U.S. economy during the gold standard era was akin to China today: a surging behemoth that was enjoying outsized growth due to a broad range of factors. As Barry Eichengreen (1996) and others have documented, the gold standard played an essential role in the international transmission of the Great Depression.

The last part of *The Curse of Cash* looks at international policy dimensions and the future of cash. Hummel seems bothered by the fact that I believe that the government ultimately has to act to regulate pseudonymous transactions technologies such as Bitcoin, at least to the extent they filter through the banking system and retail transactions. Of course, the ideas embedded in Bitcoin and related distributed-ledger technologies are extremely important and potentially transformative, not just in the financial system but in many walks of life. Governments have been right to let their development flourish, as the book emphasizes, though admittedly ransomware asking for payments in Bitcoin has become a growing problem. However, if governments stand by and allow a great majority of transactions to become completely untraceable and anonymous, they will no longer be able to collect taxes and will cease to function. That may suit the libertarian streak in some, but that initial wave of enthusiasm will no doubt pass the first time a foreign country invades, a natural disaster happens, or there is a financial crisis arising out of the cryptocurrency sector.

Relatedly, Hummel asks why I have not given more attention to the possibility that private monies could compete with, or even replace, government money. This is, in fact, discussed in the book, but let’s not confuse general transactions media with anonymous payments mechanisms. There are already a plethora of private options and technologies for making transactions without cash; that is of course precisely why cash is disappearing gradually in the legal economy outside small transactions. In the modern world, the big issue for the government is constraining large and completely anonymous transactions, not in dominating transactions.

The debate over cash should not be portrayed as a bimodal decision between going cashless or keeping things exactly the way they are now. Over time, cash has become increasingly less important in the legal, tax-compliant economy, especially as technology has created other options, yet its use in the underground economy

continues to grow. It seems reasonable to ask, as I do, whether there is a case for recalibration.

Erudite reviews from careful readers such as Hummel help bring out ideas and advance the debate, and one can only welcome them. It is very hard to begin to answer all the questions in this short article, though, which is precisely why I felt the topic merited a book-length treatment, and I hope the interested reader looks there for much more complete discussion and fully nuanced portrayal of the issues.

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## About the Author



**Kenneth Rogoff** is professor of Economics and Thomas D. Cabot Professor of Public Policy at Harvard University. From 2001–2003, he served as Chief Economist at the International Monetary Fund. His earlier books include *Foundations of International Macroeconomics* (with Maurice Obstfeld, MIT Press, 1996) and *This Time Is Different* (with Carmen Reinhart, Princeton University Press, 2009).

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# Responding to Oberholzer-Gee and Strumpf's Attempted Defense of Their Piracy Paper

Stan J. Liebowitz<sup>1</sup>

[LINK TO ABSTRACT](#)

In September of 2016, I published an article (Liebowitz 2016b) in *Econ Journal Watch* (henceforth referred to as EJW) that critically examined a well-known 2007 article by Felix Oberholzer-Gee and Koleman Strumpf (henceforth OS), who had found piracy to have essentially no impact on record sales (OS 2007). Although OS were invited by the editors of EJW to publish a response contemporaneously with my article, they instead submitted their response to *Information Economics and Policy* (IEP) several weeks after EJW published my article. That response by OS (2016) also included their reactions to several other criticisms I had made about a set of four “quasi-experiments” found in their 2007 article. My criticism of those quasi-experiments is found in Liebowitz (2017).

This paper responds to the claims made by OS in IEP.<sup>2</sup> Comparing their IEP article to my original EJW article reveals that their IEP article often did not respond to my actual criticisms but instead responded, in a cursorily plausible manner, to straw men of their own creation. Further, they made numerous factual assertions that are clearly refuted by the data, when tested.

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1. University of Texas at Dallas, Richardson, TX 75080. I would like to thank Steve Margolis and Alejandro Zentner for comments, and the Center for the Analysis of Property Rights and Innovation for financial support.

2. I attempted to respond to the OS comment in IEP, but my submission was rejected. The editor of IEP stated “that continued debate on this one paper [OS 2007] is not helpful to researchers actively working in this area, or to IEP readers.” I should note that Oberholzer-Gee has been, for that editor, a reference, coauthor, and dissertation committee member.

I must also note that OS's reply is incomplete. For example, I noted in my EJW article that OS reported the average number of German students on vacation—their key instrument—to be 9.855 million (out of a reported 12.491 million students), although these values implied that the average *share* of students on vacation was a remarkably high 79 percent (Liebowitz 2016b, 381). After examining the German school calendar for that period, I showed that this average share of students on vacation was too high by a factor of about four. Either the 9.855 and 12.491 values were misreported, or there are important errors in their main data set, which remains publicly unavailable. I accordingly referred to this large error affecting a crucial variable as a “canary in the OS coal mine.” I made plain that I considered the variable to be “mismeasured” and that OS's major results thus might be entirely unreliable:

It appears, therefore, that there is something very amiss with the OS NGSV [students on vacation] numbers that were used in their regressions. With the NGSV values used in the regressions being too large, on average by a factor of four, there is no telling what the impact might be on the regression estimates since we have no idea how these measurements correlate with the correct values. (Liebowitz 2016b, 382)

But in their IEP article, OS do not acknowledge or address this important issue at all.

Another ‘canary in the coal mine’ that I discovered working on this rebuttal has to do with a heretofore unreported but important error in OS (2007). OS mismatched their weekly download data and school vacation data, with the two sources being off by a week. The error corrupts their reported regression results based on their key instrument. This new material is discussed in detail below.

OS (2016) also fail to respond to some other matters; for example, they do not attempt to defend two of their four quasi-experiments that I have argued to be seriously flawed. But, as we will see, OS did mount responses to a number of points I made in EJW that, by comparison to the charge that their key instrument was seriously mismeasured, were often far less important. In a similar vein, they also ‘responded’ to several arguments that they claimed or implied I had made in my EJW article, when in fact I had not made those arguments.

To make it easier to follow the material below, the numbers at the end of my section headings indicate the section numbering found in OS's IEP article.

## **The excessive variability of OS's download data (2.1)**

The key novelty of OS's 2007 article was its authors' access to download information from two pirate servers during the final 17 weeks of 2002. Their main results depended entirely on the reliability of this download data.

In EJW I examined the variability of the weekly OS pirate download data, concluding that it was both remarkably higher than economic intuition would suggest and also much higher than the variability of other piracy data. Due to its abnormal week-to-week variability, I concluded that the OS download data appeared to be of dubious reliability. In their IEP response, OS misrepresent my analysis and provide an error-ridden rebuttal.

Note that OS's download data initially contained 260,889 American pirate downloads (covering 17 weeks) that were reduced to 47,709 after OS matched these downloads to the sample of music albums used in their regression analysis (see OS 2007, 9). When I examined their download data in EJW, I expressly used the initial, unreduced sample of downloads, precisely to avoid any possible concerns that the album-matching process might have played a role in causing the unusually high weekly variability. Here is what I wrote in EJW, in the main text:

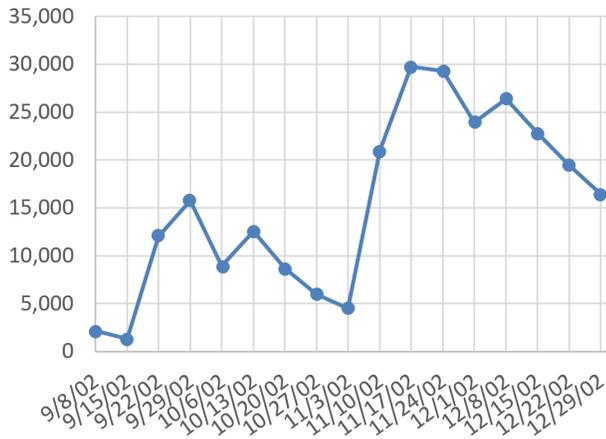
The OS download data in the charts above [showing extreme variability] are taken from OS's tables listing the *full* American download numbers. In other words, these are the American download numbers *prior* to OS's attempt to match American downloads to American sound recordings. (Liebowitz 2016b, 381, emphasis in original)

Nevertheless, in their IEP article OS overlook what I wrote and blame the seemingly unreasonable variability in downloads on the very album-matching process that I expressly circumvented:

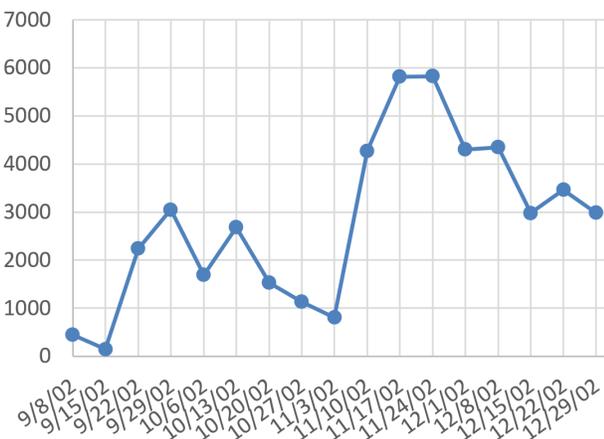
The difference [higher variability in OS's download data than other data sets] is not difficult to understand. Our analysis omits album-weeks during which an album has not yet been released... The omission is empirically important... [T]he effective [matched] download rate in our data differs from the total weekly number of downloads, and this difference is greater in the early weeks of the sample when many albums had not yet been released. (OS 2016, 62)

Obviously, their ‘explanation’ has nothing to do with my demonstration of the unusually high variability in their data, since I used the “total weekly number of downloads,” not the matched downloads.

**Figure 1a.** All U.S. downloads in OS dataset



**Figure 1b.** Matched U.S. downloads in OS dataset



But even had I used the matched data, their ‘explanation’ would still be wrong, because their claims about differences in the matched and total download data—claims for which they offer no evidence—are wrong. For example, their assertion that album releases in their matched data cause “empirically important” increased variability is false. We can examine differences in the data by comparing

Figures 1a and 1b, which show the total downloads and matched downloads, respectively (note the different values on the vertical axes). If the matched-album data set were to have significantly increased weekly variability, as OS claim, then the weekly variability should be clearly greater in Figure 1b than in Figure 1a. But clearly, the same excessive weekly gyrations affect both samples, and this is confirmed by the correlation of 0.974 between the two measures. Any difference in variability is trivial. The additional OS assertion, that the difference between matched and unmatched data would be greatest in the early weeks, is evidently wrong as well, since the main noticeable differences are in the later weeks and the correlation is higher in the first half of the period (0.99) than the second half (0.87).<sup>3</sup>

After incorrectly suggesting that the excess variability in their pirate download data was due to their matching downloads to albums, OS change direction and argue that the temporal variability of their weekly download data is reasonable because their data show weekly trends similar to a different and purportedly reliable data set. After declaring that the leading data sets measuring downloads, BigChampagne and NPD, were of “poor quality,” OS assert that a data set from Internet2 contained a “better” measure of pirate downloads. OS also assert that Internet2 weekly data during 2002 had a positive correlation of 0.49 with their weekly data.

These assertions, too, are erroneous. Most importantly, I find that the Internet2 data are *not* positively correlated with the OS data. Instead, the correlation of Internet2 values with the OS album-matched download data is  $-0.68$  for the full download data set, which is the more appropriate comparison, and  $-0.62$  for the matched data. I realize that my calculated correlations are remarkably different than the  $+0.49$  correlation reported by OS, but all I can do is make my raw numbers and calculations available to everyone,<sup>4</sup> allowing any reader to check the raw data and results for themselves, and hope that OS will provide their calculations and data so as to help ascertain why their results are different from mine.

If OS were correct that Internet2 provided the best download data, then the strong negative correlation of this data with the OS data would actually further validate my claim that OS’s weekly download data appear to be unreliable. Al-

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3. The OS download data (both pre- and post-matching) can be found in Table 3 on page 38 of the March 2004 working paper version of OS’s “The Effect of File Sharing on Record Sales: An Empirical Analysis” ([link](#)).

4. Here are the 34 numbers, for each of 17 weeks. OS download data (taken from the source in footnote 2) for weeks of September 8 to December 29, 2002: 2164, 1347, 12051, 15742, 8922, 12534, 8688, 5967, 4468, 20936, 29755, 29284, 23914, 26404, 22820, 19428, 16465; Internet2 data can be found in Table 6 ([link](#)) in each weekly report, measuring packets in Gigabytes for the “File Sharing” category, weeks of September 9 to December 30, 2002: 168.3, 180.6, 175.6, 84.41, 141.6, 116.3, 82.28, 96.23, 84.39, 76.0, 70.56, 68.37, 63.43, 52.35, 24.73, 6.74, 9.714. My full analysis, including the raw data from which the above numbers are taken, and the Excel sheet calculating the correlations, can be found in the online appendix ([link](#)).

though I would like to present that negative correlation between Internet2 and OS data as a powerful piece of evidence that the OS data are unreliable, I cannot do so—because, contrary to OS’s claim, Internet2 is anything but a superior data source, for our purposes. Internet2 is a specialized research and education network. OS know this since they elsewhere defined Internet2 as “the U.S. high-speed network which primarily connects universities” (OS 2010, 28). Internet2 data, therefore, are narrowly based and not representative of overall Internet piracy, particularly at times when students go home, such as during the Christmas or summer breaks.

I can only conclude that the claims made by OS in their IEP article actually enhance my original arguments that OS’s download data, the key novelty of their analysis, is highly suspect.

## **A newly discovered error in OS (2007)**

OS state, with regard to their download (piracy) data: “Our data were collected from two OpenNap servers, which operated continuously for 17 weeks from September 8 to December 31, 2002” (OS 2007, 6). September 8, 2002, was a Sunday. December 31 was a Tuesday. This is not 17 weeks of data—it is 16 weeks and three days. How OS handled the partial week is unclear.

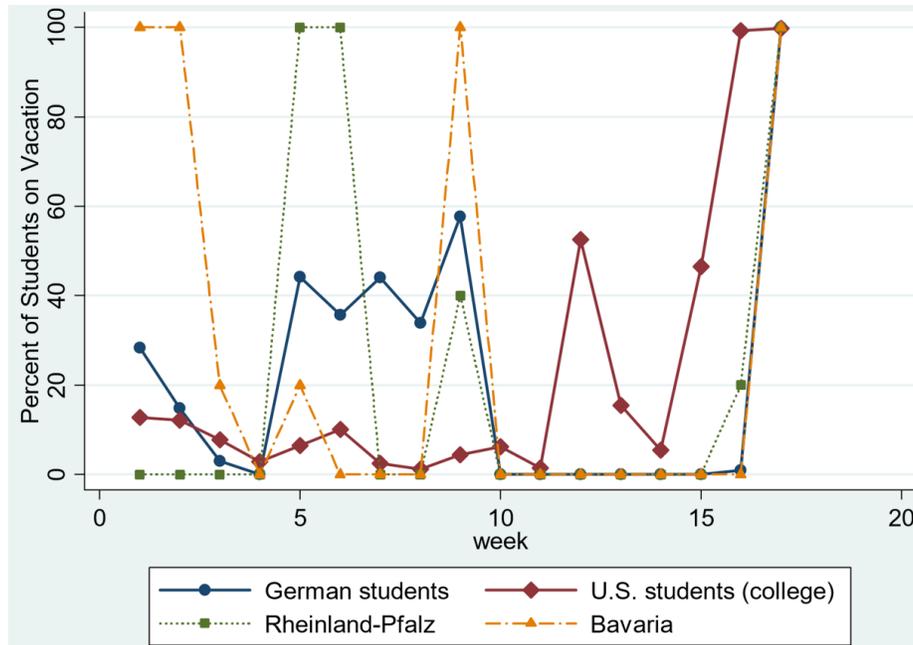
Nevertheless, it is reasonable to expect, and in fact the logic of their analysis requires, that their data on German schoolkids would be based on the same 17 weeks as the download data. But it appears that the school data are mismatched by a week from their download data.

In Figure 2, I have reproduced from an earlier version of their paper ([link](#)) a chart representing the share of German students on vacation each week that is more legible than the one found in Figure 1 in OS (2007). The aggregated German students are represented by the blue line with circle markers, although the circles are covered in later weeks by yellow triangles and green squares representing students in the German states of Bavaria and Rheinland-Pfalz respectively. Note that during the first two weeks, all the students in Bavaria were reported to be on vacation whereas for the first four weeks, none of the students from Rheinland-Pfalz were reported to be on vacation.

In the Appendix I reproduce a web page providing the school holidays for every state in Germany during the 2002/2003 school year. It shows that the week of September 8 is a vacation week for some German states. In particular, Bavaria (Bayern) had its summer vacation from August 1 through September 16, a Monday. Thus, during the week of September 16, one of five days was a vacation. We can see this 20 percent value for Bavaria in the third week on OS’s chart. Similarly,

the school calendar for Rheinland-Pfalz indicates their vacations took place from Monday September 30 to Friday October 11. OS's chart shows Rheinland-Pfalz having their fall vacation in the fifth and sixth week.

**Figure 2.** Colored version of OS's Figure 1 (2007)



Source: OS, "The Effect of File Sharing on Record Sales: An Empirical Analysis," December 2006, page 55 ([link](#)).

But, if the first week of download data begins on Sunday September 8, as OS state, then the school week of September 16 (where Bavaria had 20 percent vacations) was the *second week*, not the third week reported by OS. Similarly, when Rheinland-Pfalz went on vacation on Monday September 30, that is the fourth week of download data, but OS count it as the fifth week.

We can see this at the end of the data range as well. The 16th week begins on Sunday December 22, and the 17th week of downloads begins on Sunday December 29. The 2002 school-year holiday calendar shows that the Christmas holiday (*Weihnachten*) begins on December 23 (a Monday) in every German state. So, the last two weeks have all students on vacation—yet the OS data incorrectly show virtually no German students (just the students in Rheinland-Pfalz) on vacation during the 16th week.

This means that the OS analysis has mismatched the download and vacation data. The download data begin on September 8, but the vacation data actually begins the week of September 1.<sup>5</sup> Each of these two variables is mismatched, relative to each other, by one week during the entire seventeen weeks of observations. OS are comparing this week's U.S. piracy with last week's German school vacations, although the logic of the relationship—i.e., American piracy increases because German students on vacation increase the files available to American pirates—is clearly one that requires direct concurrency. By itself, this is sufficient to call into question all the results of OS's analysis based on these two variables, which is almost their entire set of regression results.

## **Could American pirates be affected by German school holidays?**

Using their download data, OS (2007) claimed that American pirates downloaded a surprisingly large share of their files, 16.5 percent, from German pirates. Because of the importance of German files to American pirates, OS argued that their key instrument, the number of German students on school vacations, would also have an important impact on the availability of pirate files to American pirates, assuming (without evidence) that German students shut off their computers while at school but keep them on during school vacations.

In EJWI I analyzed this claim by making five adjustments required to estimate what share of files downloaded by Americans were likely to be influenced by German school holidays. I performed this analysis in a conservative fashion, making numerous assumptions favorable to the OS hypothesis. My conclusion was that German school holidays were unlikely to influence more than 0.14 percent of files available to American pirates. This number is so low that any impact of German school holidays would likely be swamped by statistical noise. Further, even if this number understates the true impact by a considerable margin, the true impact would still be trivial in size.

OS make several claims in IEP to dispute my conclusions about the small impact of German school holidays on American pirates. I address those claims below.

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5. Figure 3 below gives a corrected version of OS's Figure 1, listed as Figure 2 here. It is also worth noting that some of the values found in OS's chart are wrong. For example, they indicate that the share of students reaches almost 60 percent during the ninth week. In fact, the share of students on vacation never reaches above 48 percent, except for the Christmas weeks.

## Germans overrepresented in the OS database (2.4)

In EJW, I concluded that OS's download data overstated the importance of German files to American pirates. American pirates were only 2.3 times as numerous as German pirates in the OS data, but as I documented, more authoritative sources indicated that 2.3 was far too low a number. Consider:

1. The U.S. population under age 40 was 4 times that of Germany. (OECD)
2. The U.S. had 5 times as many pirates as Germany. (BigChampagne)
3. The U.S. Internet penetration rate was 1.1 times that of Germany. (OECD)
4. The U.S. broadband penetration rate was 1.7 times that of Germany. (OECD)
5. The musical taste of American pirates and the time of day they downloaded files was more closely matched to that of other Americans than to Germans (who were in far-off time zones listening to German and American music), implying that American pirates would download American files at a rate beyond what the first four factors alone would imply.

These facts make a compelling case that American pirates would be considerably more than 2.3 times as plentiful as German pirates and thus that the OS data overcounted Germans relative to Americans. I concluded that it would be conservative to raise the number from 2.3 to 4.6, thereby halving the share of Germans and the importance of German files to Americans. This seemed conservative since 4.6 is less than the simple comparison of the number of pirates (point 2 above), and ignores the time-zone, language, and broadband advantages of American files to American pirates.

In IEP, OS provide two defenses of their data and its 2.3 ratio of American to German pirates. First, they criticize BigChampagne's measure of the number of pirates (point 2 above). They argue that BigChampagne's methodology was flawed because it measured the "number of users who share files, not the number of users who download content" (OS 2016, 63). OS apparently fail to understand that BigChampagne is measuring exactly what should be measured because American pirates get their files from other pirates *making files available*, not from pirates who do not make their files available. Additionally, OS claim that BigChampagne failed to properly measure the number of pirates in Japan (*ibid.*)—but it is only the comparison of Germany relative to the U.S. that matters, making this claim irrelevant.

Second, OS (2016, 63) assert that the importance of German files to Americans is supported by “better” contemporaneous evidence from Expand Networks. I should note that the Expand Networks paper cited by OS does not say anything about the importance of German files to American pirates. The referenced paper, however, does say that Expand Networks collected their data by monitoring “the line that connects some 10,000 local [Israeli] ADSL and cable users to the USA” (N. Leibowitz et al. 2002, 2). It seems fanciful to believe that this setup could have provided an accurate measurement of the importance of German files to American pirates. Thus, even if there were some data from Expand networks showing a large share of German users, a claim unsubstantiated by OS, it seems incorrect for OS to claim that Expand Networks had better data than BigChampagne, which, unlike Expand Networks, had piracy monitoring as its main source of revenue.

### **How many children are affected by typical school holidays? (2.5)**

At the end of their section 2.5, OS dispute my claim that the typical German school holiday affects only a small share of German students at a time. My EJW paper calculated (in a manner generous to OS) that 25% of German students were affected by a typical school vacation. This would have been appropriate if vacations were evenly spread out with non-vacation weeks, but the vacation weeks and non-vacation weeks tend to be bunched together, as seen in Figure 3.<sup>6</sup> OS (2016, 64) correctly point out that it would be better to have used the average weekly *variations* in the number of students on vacation.

But they also implied, erroneously, that my usage of a 25 percent average share of students on vacation understated a value calculated using weekly variability:

[T]he vacation share is quite volatile and bounces around the entire range of 0% to 100%. There are even two consecutive weeks where no kids and then all kids are on vacation. ... [T]he claim that... there is little variation in this type of supply is incorrect. (OS 2016, 64)

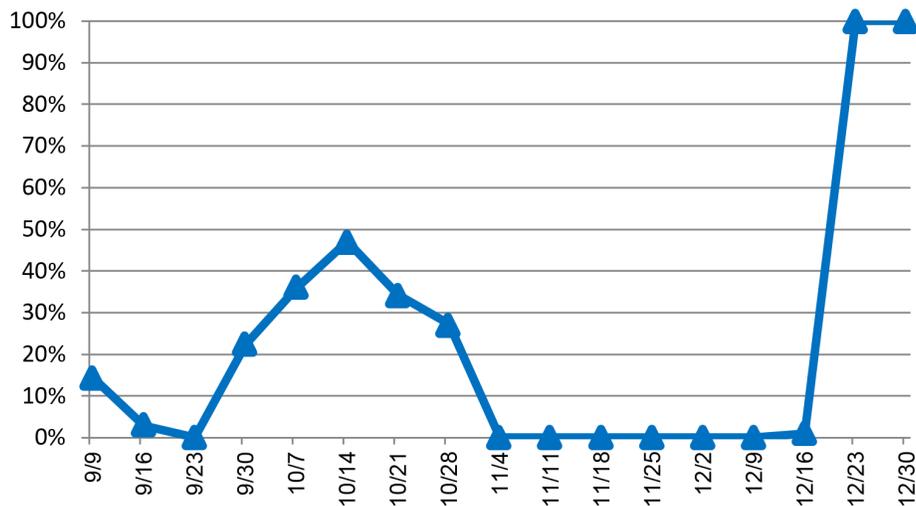
For some reason, OS never calculate the average weekly variation that they propose, although it is easy to do and could presumably have substantiated their assertion that the weekly vacation variability was greater than the value I had used.

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6. This figure differs from the share of German kids on vacation found in Figure 4 of my earlier EJW article because the figure in my prior article matched OS’s analysis by beginning on September 2 and ending on December 23, whereas this figure begins and ends a week later so as to match the weeks used in OS’s download data (2007) as discussed above.

Performing that calculation, the average week-to-week fluctuation is found to be 13 percent—48 percent *lower* than the 25 percent value that I used in EJW, even though it includes the “two consecutive weeks where no kids and then all kids are on vacation.”<sup>7</sup> This method, therefore, leads to an impact of German vacations on American file availability that is considerably *smaller* than the one I used in EJW. If this measure of the impact of school vacations is used in place of my original estimate, the estimated overall impact of German school holidays on files available to American pirates would be 0.07 percent, not the 0.14 percent I reported, making the impact of school vacations even less consequential to American pirates than what I reported in EJW.

**Figure 3.** Share of German schoolchildren on vacation, 2002



### Schoolchildren as a fraction of German file sharers (2.5)

The importance of German school holidays depends in part on the share of German pirate files that is controlled by schoolchildren. To estimate this share, I relied on surveys measuring pirates in the population by age group. I used data from France and the U.S., because I could not find similar German data. These surveys included only individuals more than 11 years of age, since younger children were

7. If we remove the weeks with no weekly change and Christmas, as I did in my original calculation, the average value changes slightly to 13.6 percent. If we use the original, off-by-a-week OS data, the average value would be 14.7 percent, still well below the generous 25 percent value I used in the calculations.

thought to be unlikely to pirate much music. The data indicated that piracy rates for individuals aged 18–40 were of similar magnitudes to those aged 12–17, and there were many more of these older individuals. Using these surveys, and providing extra weighting to age groups with higher piracy rates (to pick up likely intensity differences), I concluded that the share of all German pirate files controlled by students in Germany aged 12–17 was likely to be in the range of 15 percent.

OS do not provide any data on Internet piracy rate by age to contradict my calculations. Instead, they criticize my calculation by making several claims, some of them misleading. They state that my “calculation assumes that only students between the ages of 12 and 17 are affected by school holidays, and that children in Germany have ‘very limited’ interest in English language songs because most do not speak English” (OS 2016, 63).

Contrary to their first assertion, I did try to account for students younger than age 12. As I wrote in EJW, in my calculations I removed all pirates over the age of 50 in the U.S. and all those over the age of 60 in France, in order to compensate for those (presumably small in number) pirates younger than 12 who were not being measured in the surveys (Liebowitz 2016b, 390). OS’s second assertion mischaracterizes my statement about German students not speaking English; that statement was about German students *below the age of 10*, 80 percent of whom had not yet taken any English classes (Liebowitz 2016a, 389–390 n.30).

OS then devote a lengthy paragraph to arguing there was “surprisingly little German music” listened to by Germans (2016, 63). The implication would seem to be that the degree to which Germans listened to German language music played a role in my calculations. *It did not*. Nevertheless, even though language differences are irrelevant to my EJW calculations, OS’s assertion that there is a very strong overlap in musical tastes between the U.S. and Germany is inconsistent with the data. Data from the IFPI, the international organization representing record companies, indicate that 45 percent of sound recording sales in Germany in 2002 were of domestic origin, and German-language songs and albums frequently made lists of top ten sellers.<sup>8</sup>

To remain conservative in my calculations, I also made several assumptions likely to overstate the share of pirate files controlled by German students. For example, I assumed that Germany had a uniform age distribution, which overstated by almost 50 percent the relative number of individuals aged 15 compared to individuals aged 35, as I pointed out in EJW (Liebowitz 2016a, 390 n.32).

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8. For example, the IFPI has a top ten singles list in 2004 including these songs: “Dragostea Din Tei,” “Lebt denn dr alte Holzmichl noch?,” and “Augen auf!” Additionally, these albums were in the top ten in 2005: *Noiz*, *Von Hier An Blind*, *Es Ist Juli*, *Willst Du Mit Mir Gebn*, and *Laut & Leise*. I do not have data for 2002 or 2003, but it is clear that a good deal of leading music in Germany at that time was in German and would be of little value to American pirates.

Finally, OS do not use any data to support their claim that half of German pirate files were controlled by schoolchildren. They merely assume that music piracy takes place only among people 24 years of age or less, with half of that group being impacted by school vacation days. They provide no evidence to support this claim, and ignore the plentiful evidence to the contrary. Nevertheless, even if we were to accept the OS claim that secondary students controlled half of the pirated files in Germany, it would increase my estimate by slightly more than three times, so that instead of German school holidays influencing 0.14 percent of American pirate files (or 0.07 percent, as seen in the last section), they would influence about 0.47 percent (or 0.23 percent), still a very small number that is consistent with my conclusions.

## The implausibility of first-stage estimates (2.3)

OS tell us in their section 2.3:

The first-stage estimates in our analysis—the influence of German vacations on downloads in the U.S.—seem large... (OS 2016, 62)

Their usage of the term “large,” in this case, is a remarkable understatement.

The first-stage coefficient relating German school holidays and American downloading implies that when OS’s average number of German students on vacation go back to school, American downloading would drop by 150 percent of its mean value, if that were possible. This indicates that when all German students are in school (seven of the 17 weeks of the study), American piracy would vanish. The terms *implausible* or *ludicrous* seem more accurate than *large*. Surely, the implication that American piracy ends when German kids return from vacation, when more than 99 percent of pirate files are still available (from pirates who are not returning German students), is absurd.

OS (2016, 62–63) try to explain away this implausible result by appealing to skewness in the data, ignoring my discussion of this topic in EJW (Liebowitz 2016b, 383–384). OS make the obvious point that removing observations with zero downloads—an exercise that I myself carried out and reported on in EJW—will raise the average number of downloads. They argue that after removing these observations, the implied impact on American piracy from kids returning from vacation “is smaller than the [new, higher] mean” and “seems quite plausible.” Being smaller than the mean, however, merely implies that American piracy does not drop all the way to zero when an average number of German schoolchildren come back from vacation; in EJW I surmised that the piracy decline would be “still

a very large 72 percent” (ibid., 384). So it seems OS are suggesting that in response to German students returning from vacation, any American piracy decline less than 100 percent would be “quite plausible,” but this is nonsensical. With over 99 percent of pirate files still available to Americans from other suppliers, it would be far from “quite plausible” for the return of German schoolchildren to have any but a very small impact on American piracy.

Finally, OS argue that German holidays also cause a large decrease in the time it takes for American pirates to download files. But this additional data is not *independent* support because it comes from the same source, those 2002 pirate servers, as their dubious download data. Whatever is causing OS’s implausibly large measured relationship between German vacations and American downloads is most likely also causing an implausibly large reported relationship between German vacations and the completion time of American downloads.

## **The OS instrument, U.S. record sales, and downloads (2.2)**

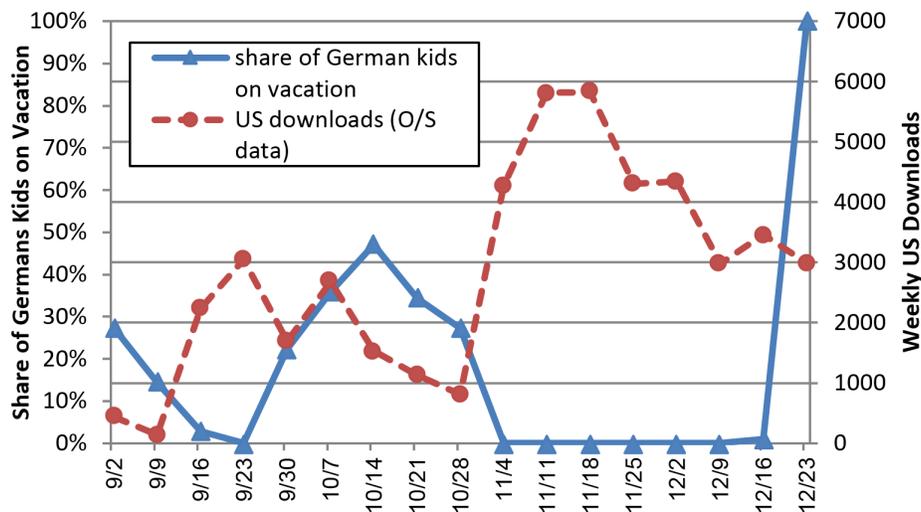
An early version of my EJW article included a demonstration that the German school vacation variable was not independent of American record sales, although that discussion did not appear in the published version. OS (2016) try to counter this point despite its absence from the published EJW article. I did not include this material in the published article because it is *possible* (although I consider it doubtful) that the inclusion of other variables in the regressions might condition German vacations to become independent of American record sales.

What OS did not try to counter, however, was my discussion, included in both the early and published versions of my EJW article, of what appears to be a serious inconsistency in their analysis. OS hypothesized that German school vacations increased U.S. pirate downloads, and their first-stage regressions using disaggregated data (discussed in the previous section) indicated that German vacations enormously *increased* U.S. pirate downloads. But contrary to their very large positive measured relationship between American downloads and German vacations, these two variables, at the aggregate level, displayed a *negative* relationship (because, as seen in Figure 4, the weeks with no German vacations are also when downloads are highest).

Because OS never made their data or code public, their statistical analysis is a black box, and in order to test the accuracy and consistency of this black box, we must compare what went in with what came out (e.g., by comparing the incorrect average value of student vacations derived from the black box with the much

lower value derived from aggregate statistics). Thus, to test the consistency of their analysis with regard to German vacations and American downloads, we need to use the weekly vacation data they fed into their black box, and not the vacation data corrected to make the weekly timing consistent. Using this data, weekly aggregate downloads and vacations have a correlation coefficient of  $-0.71$  without the sui generis Christmas weeks, and  $-0.37$  including the Christmas weeks,<sup>9</sup> and frequently have a statistically significant negative relationship in regressions with and without time trends.<sup>10</sup>

**Figure 4.** German school vacations and U.S. downloads, 2002



The aggregate weekly relationship, therefore, does not conform with OS's strongly positive measured relationship. The aggregate data, however, are just the sum of the individual album-based data used in OS's 2007 regressions. It does not seem possible for disaggregated downloads of individual albums to have such a strong positive relationship to German vacations while at the same time the relationship between German vacations and aggregated album downloads has a negative relationship (with no variables other than album fixed effects and time

9. These correlations, also reported in Liebowitz (2016b), are stronger than if we use the correctly matched download and vacation data, although the latter relationship is irrelevant for testing the consistency of OS's statistical analysis.

10. Regressing downloads on school holidays provides a negative relationship whether the Christmas week is included or not, but is significantly negative only excluding the Christmas week. Including a time trend (linear, quadratic, or sixth-degree polynomial), with or without the Christmas week, leads to a significant negative relationship in five of six cases, and an insignificant negative relationship in the sixth case.

trends in OS's regressions). This contradiction indicates a potentially serious problem with the black box of their data analysis, as described in greater detail in the section beginning on page 384 in my EJW article.

## Quasi-experiments

The 2007 OS paper contained four quasi-experiments that they considered “an important complement” to their main analysis (2007, 4). Since these quasi-experiments used publicly available data, I attempted to replicate those experiments in (Liebowitz 2017). My replications did not support their conclusions in any of the four quasi-experiments. In IEP, OS attempt to defend their results in two of the four quasi-experiments, although they are silent about the other two quasi-experiments. I respond to their claims below.

### Piracy and summer music sales (2.6)

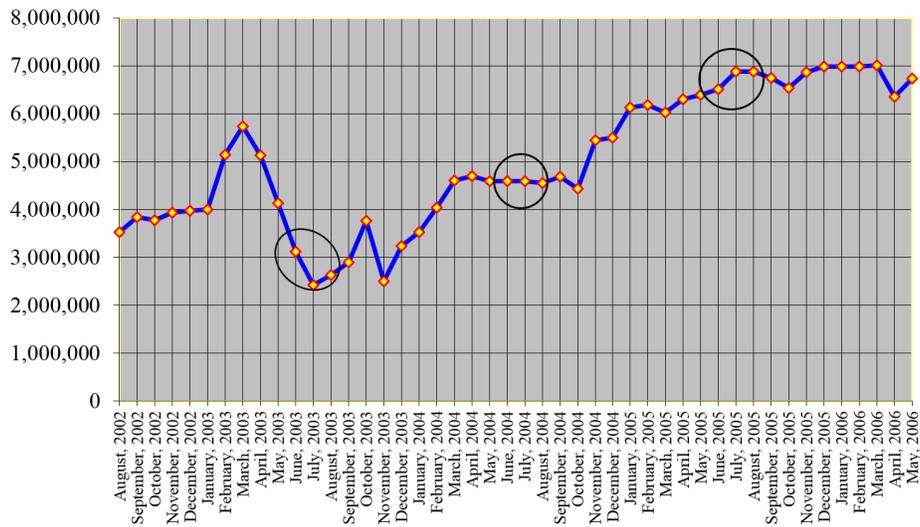
As an intermediate step in their first quasi-experiment, OS (2007, 36) claimed that American piracy routinely fell in the summer because college students lost access to their high-speed Internet connections. They used 46 months of Big-Champagne data, represented in Figure 5 (with summers circled), to conclude that piracy decreased every summer. This was a necessary result for OS to then conclude that piracy fell in other summers for which they did not have piracy data, a requirement for a second portion of the quasi-experiment where OS examined whether record sales rose in the summer due to the purported decrease in piracy, for all post-Napster years (2000–2005) relative to pre-Napster years.

OS tested whether piracy routinely fell in the summer by running a regression using this BigChampagne data set that contained three complete summers (2003–2005). Their regression, however, included only a single dummy variable to represent all three summers (and a time trend). This effectively made it impossible for them to know whether piracy routinely fell in *each* summer.

In my 2017 article, I demonstrated that piracy did not decrease every summer (Liebowitz 2017, 1–4). Using identical data, I ran the same regression except with separate dummies for each summer. The last of the three summers, 2005, had an economically and statistically significant *increase* in piracy, meaning that a decline in summer piracy was not a regular occurrence. This is the key finding that invalidates their quasi-experiment. But OS, in IEP, ignore my regression results and continue to mistakenly assert that “these summer months represent clear breaks from the growth trend in this period” (OS 2016, 64), when the evidence plainly shows that the third summer, at least, did not represent a clear break with the growth trend.

Instead of responding to the regression evidence I provided, OS focus their discussion on a conjecture I made about whether RIAA lawsuits against pirates might have caused the decline in piracy that took place in the first summer, 2003. The lawsuits provide a competing, idiosyncratic explanation for the decline in piracy taking place that summer, *possibly* invalidating the meaning of the regression results for 2003. Since the lawsuits were idiosyncratic, the 2003 decline in summer piracy, if it was due to the lawsuits, cannot be ascribed to the summers without piracy data, since those summers did not have the introduction of lawsuits. OS seemingly fail to understand this point, since they claim that the reason for the 2003 summer decline was irrelevant to their analysis. It is relevant to their quasi-experiment, however, because you cannot apply an idiosyncratic result to other years. If, by way of contrast, the quasi-experiment had been comparing the summer share of records in 2003, when measured piracy was low, to the summer share in 2005, when measured piracy was high, then the cause of the 2003 piracy decline would be irrelevant, as OS now wish to claim in IEP. But that was not the basis of their quasi-experiment published in 2007.

**Figure 5.** Number of simultaneous pirates (BigChampagne data)



More crucially, however, OS ignore the fact that the 2005 increase in summer piracy, by itself, is sufficient to invalidate their quasi-experiment, and whether the lawsuits of 2003 further invalidate their results is only of secondary interest.

## Monthly piracy and record sales (2.7)

In their third quasi-experiment, OS (2007, 36–37) ran a regression relating the monthly level of record sales to the monthly number of pirates, using the same BigChampagne data represented in Figure 5 in the previous section. Although OS found that piracy had a statistically insignificant negative impact on record sales, they claimed the effect was economically small. When I reran their regression (Liebowitz 2017, 6–8) with what was supposed to be identical data, the coefficient was 48 percent larger than theirs. When I included the unemployment rate in the regression, because the unemployed have less money to purchase albums and more time to pirate, the coefficient on piracy quadrupled and became statistically significant.

OS do not mention these results in IEP. Instead, and in my opinion, oddly, they criticize the nature of my very standard attempt to determine the sales decline caused by piracy, for individual years (OS 2016, 64). I ran the same regression they ran, using monthly data from mid-2002 through mid-2006:  $Y = a + bX$ , where  $Y$  is monthly record sales and  $X$  is monthly number of pirates.

I then determined how much of a decline the regression coefficient implied, in a given year, by multiplying the regression coefficient by the average value of  $X$  (the average 2004 level of piracy, for example) to determine a predicted impact of piracy on sales for that year. OS, in IEP, seem to be disputing this standard calculation. OS seem to be arguing that it is necessary to (go out of sample and) separately determine the decline in albums due to piracy, in each year after Napster (even when we do not have piracy data for those years), and then average those declines to determine an average yearly decline since Napster. Obviously, by incorporating the low assumed piracy values from early years into the ‘average,’ the average will be lower than using just a later year, such as 2004. Although one might be interested in following this methodology, it is not the way to answer the question in which I was interested: How much did piracy decrease record sales in 2004 (or 2003, or 2005), and how much of the overall sales decline was due to piracy?

## How much did piracy hurt the recording industry? (3)

In their final section, OS return to some of their previous themes, minimizing the consequences of piracy for the recording industry.

First, they mix apples and oranges by comparing inconsistently defined “displacement rates,” i.e., the extent to which a pirated song replaces a purchased

song (OS 2016, 65). They used this same erroneous methodology in their 2010 article. I described those errors in detail, as well as providing a consistent methodology for comparing the “displacement rates” found in piracy studies, in a *Journal of Cultural Economics* article (Liebowitz 2016a), to which I recommend the interested reader turn for more detail. In answer to the question OS pose in their section heading—“How significant was the impact of file sharing, really?”—the correct answer, based on my literature review (*ibid.*), is ‘very significant.’

Second, they claim that five studies, other than their own, using actual piracy data instead of piracy proxies, tended to find minuscule impacts of piracy. The problem with this claim is that OS misrepresent a majority of those studies in a way that exaggerates support for their thesis. One of those studies, by Sudip Bhattacharjee and coauthors (2007), did not investigate the impact of piracy on sales but rather “chart survival,” which they found had declined. OS conflate chart survival with sales and then mischaracterize the decline as not being a decline. Remarkably, six years after Bhattacharjee publicly objected to OS’s characterization of his study, saying it was “not correct,” OS continue to mischaracterize it.<sup>11</sup> Similarly, Robert Hammond (2014) did not investigate the overall impact of piracy on sales, but merely the impact of piracy on individual artists. OS disregard Hammond’s description of his own work.<sup>12</sup> Then, OS misrepresent Tatsuo Tanaka’s 2004 rough draft as a finished study even though Tanaka himself referred to it as “version 0.1” on the cover page and stated in the conclusion “this research is very preliminary.” The paper by Luis Aguiar and Bertin Martens (2016) uses proxies for both record sales and piracy, and should not be in OS’s list of papers that are not reliant on proxies. OS also ignore David Blackburn’s 2006 paper (which was completed and submitted, unlike Tanaka’s 2004 paper), which used piracy data but found a strong negative impact of piracy.

Finally, OS claim that the very large decline in music sales since 1999 was nothing special because a similar decline occurred in the late 1970s to early 1980s. But the most recent decline is much worse than that of the late 1970s and early 1980s, as revealed by data and the memories of anyone who lived through both periods. Much of that earlier decline is an illusion, due to OS’s reliance on RIAA reported music *revenues*. RIAA numbers are accurate for units, but not for revenues; revenue figures are derived by multiplying the measured units by the list price, not from measuring actual revenues. Since 1973, real list prices have remained in only two narrow bands, with the list price of an album ranging between \$11 and

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11. When David Glenn of *The Chronicle of Higher Education* asked Bhattacharjee whether OS’s characterization of his paper as having a result similar to that of OS was correct, Bhattacharjee stated: “It is not correct to say that our work shows file sharing is unrelated to changes in sales” (quoted in Glenn 2010).

12. Hammond states: “showing that file sharing is not harmful to individual artists is not inconsistent with the well-documented fact that file sharing does great harm to the music industry” (2014, 406).

\$12 (1983\$) from 1973 through 1979 and then between \$7.50 to \$8.50 from 1982 until 2007.<sup>13</sup> The transition from the high price to the low price took place during the apparent revenue decline in the late 1970s and early 1980s. The sales decline beginning in the late 1970s, measured in units, is much smaller than the decline in revenues (18 percent versus 49 percent).

But even using the misleading revenue values, the 1980 decline is considerably less significant than the 2000 decline, per OS's Figure 3. The revenue decline that started in 1979 ended in 1982 (largely because the new lower list price had been reached), a four-year period, after which revenues rose for 17 years, surpassing its prior peak (even with lower list prices) within 10 years (of the trough). The decline that started in 2000 has lasted about four times as long, and 17 years later revenues still haven't begun to recover. Even though in 2015 the population was 40 percent larger and per capita income almost 60 percent larger than in 1982, real revenues had dropped to a level below the bottom level of the early 1980s.

It is also important to note that there is a simple hypothesis, neglected by OS, that is consistent with both the decline in the early 1980s as well as the most recent decline starting in 2000. The decline in the early 1980s coincides with the rise of the first format associated with piracy—cassette tapes, which became the dominant format by 1983. Therefore, the early 1980s sales decline coincided with a rise of piracy (which diminished as CDs became dominant), just as the decline starting in 2000 did.

## Conclusion

I believe that the weight of the evidence, including my earlier examination of OS's data and methodology in EJW, my failed replication of their quasi-experiments (Liebowitz 2017), and, as just described, their unwillingness to explain some questionable results and their flawed and misleading responses when they have attempted to explain questionable results (OS 2016), clearly reveals serious problems with the original OS 2007 article. In many of the scientific and biological disciplines, if the original authors cannot provide a cogent explanation of questionable research results, journal editors often label those articles with 'expressions of concern' or retract the article outright. Although such editorial behavior appears to be far from the norm among economic journals, a quick perusal of the *Retraction Watch* website ([link](#)) should make clear how this works and how standard it has become in other research fields. I believe it would be prudent,

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13. I do not know why the list price changed so dramatically at that point in time, but this price decline is the leading cause of the steep decline in RIAA 'revenues' in the period from 1978 until 1982.

and well within the norms of the broader research community, for the editors of the *Journal of Political Economy* to put some such marker on the “The Effect of File Sharing on Record Sales: An Empirical Analysis” so that future researchers and policy analysts will not be building their research programs or policy remedies on the flawed data, analyses, and conclusions found in that article.

## Appendix

A document providing the raw data and calculations supporting results in this article is available for download ([link](#)). A spreadsheet containing the underlying data for the figures in the article is also available for download ([link](#)).

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## About the Author



**Stan Liebowitz** is the Ashbel Smith Professor of Managerial Economics at the University of Texas at Dallas. He has authored many articles examining the influence of new technology on intellectual property, beginning with a study on photocopying's impact, for the Canadian government, and continuing with digital copying. He has also written numerous articles about network effects and a few articles about measuring research performance. Most of his research is available on the SSRN. His email is [liebowit@utdallas.edu](mailto:liebowit@utdallas.edu).

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# Economics Doctoral Programs Still Elide Entrepreneurship

Dan Johansson<sup>1</sup> and Arvid Malm<sup>2</sup>

[LINK TO ABSTRACT](#)

*The theoretical firm is entrepreneurless—the prince of Denmark has been expunged from the discussion of Hamlet.*

—William Baumol, “Entrepreneurship in Economic Theory” (1968)

Many academics and policymakers regard entrepreneurship as a vital topic, often considering it a driving force behind job creation and economic growth. But thinking about entrepreneurship mostly takes place outside of mainstream economics. In his article “The Place of Entrepreneurship in ‘The Economics That Might Have Been,’” Sidney Winter (2016) aptly defines mainstream economics as the “unflinching application of the combined postulates of maximizing behavior, stable preferences, and market equilibrium.” Theories of economic change that define the entrepreneur, such as those proposed by Joseph Schumpeter, Frank Knight, Israel Kirzner, or Deirdre McCloskey and Arjo Klamer have not found a receptive audience in that dominant strand of economics. The entrepreneur represents interpretive asymmetry, variation, and novelty. A richer body of economic theory could explore the factors that make for interpretive creativity and its consequences, such as market innovation and economic growth. But the entrepreneurial element is difficult to formalize mathematically and was thus pushed out of view as such formalization became increasingly dominant from the 1930s onwards (Baumol 1968; 2006; Blaug 1986; Barreto 1989; Hébert and Link 1989; 2007;

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1. Örebro University School of Business, 701 82 Örebro, Sweden; HUI Research, 103 29 Stockholm, Sweden. We are grateful for the comments of participants at seminars at Aston University, HFI Research, the 86th annual meeting of the Southern Economic Association, and Örebro University, and those of Magnus Henrekson, Johan Karlsson, Inna Kozlinska, Mikael Stenkula, and two anonymous referees.

2. Royal Institute of Technology (KTH), 100 44 Stockholm, Sweden; Swedish Entrepreneurship Forum, 701 82 Örebro, Sweden.

Winter 2016). Ever since, mainstream economics has elided the entrepreneur—and, here, we show that it continues to do so.

This article updates a study by Johansson (2004), who, treating the academic year 2003–2004, studied the prevalence of *entrepreneur* and related words in the subject index of leading English-language textbooks assigned in microeconomics, macroeconomics, and industrial organization courses within economics doctoral programs in Sweden. The present study treats the academic year 2014–2015, and it examines textbooks used in top economics doctoral programs in Sweden and the United States. We use the subject index of the textbooks to determine the presence of entrepreneurship. In addition, we conduct a qualitative analysis of how the concept of the entrepreneur is used when it is mentioned. We also study the prevalence of the term *entrepreneur* (including *entrepreneurship*, etc.) in articles used in said courses. Finally, we examine the full course program to see if any courses in entrepreneurship are offered.

We find that most textbooks still do not use the entrepreneur as a theoretical concept. A few of the more recent textbooks do give greater exposure to the entrepreneur. But the few textbooks that refer to the entrepreneur do not define the concept theoretically (with one or two arguable exceptions). For instance, they use *entrepreneur* synonymously with *borrower*, or they leave the concept undefined entirely. Hence, even textbooks that cover entrepreneurship to some degree do not offer well-recognized definitions such as introducing new combinations (Schumpeter), creative destruction (also Schumpeter), making judgmental decisions under conditions of uncertainty (Knight), discovering of opportunities (Kirzner), or rhetorical leadership in communicating a vision to associates (McCloskey and Klammer). The root word *entrepreneur* appears in 27 out of 515 articles examined, but there is no article that covers the economic function of the entrepreneur. Further, we found that only one of the universities studied offers an economics course in entrepreneurship. We conclude that doctoral candidates in economics rarely encounter meaningful theories about the entrepreneur's economic function in their core training.

## Theoretical background

Many definitions of *entrepreneur* have been proposed within economics, three of which dominate contemporary discourse:<sup>3</sup>

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3. See, e.g., Hébert and Link 1989; 2007. They suggest a “synthetic” definition incorporating historical themes of entrepreneurship, such as risk, uncertainty, innovation, perception, and change, and entrepreneurial activities, such as coordination, arbitrage, ownership, speculation, innovation, and resource alloca-

- Schumpeter (1934/1912) defined the entrepreneur as the economic actor who engages in *innovation*, which is the introduction of new ways of employing existing productive means. Such innovation involves *invention*, which is the novel combination of factors of production and is the distinctive activity of actors known as inventors. Schumpeter also distinguished innovation from financing, the activity of economic actors known as capitalists. He classified innovations into five broad categories: the introduction of a new good, the introduction of a new method of production, the opening of a new market, the conquest of a new source of supply of raw materials or half-manufactured goods, and the carrying out of a new organization. Creation and creativity are associated with Schumpeter's entrepreneur, partly because of his famous expression "creative destruction" (1950/1942, ch. 7). Schumpeter's definition of entrepreneurship is the most widely used.
- Knight (1921) held that the entrepreneurial function entails making judgmental decisions and bearing uncertainty.<sup>4</sup>
- Kirzner (1973) portrays the entrepreneur as a discoverer of opportunity. Kirzner frequently emphasizes entrepreneurship as the source of any means-ends framework within which optimization would be pursued (e.g., Kirzner 1973, 33; 1979, 131; 1985, 30).

Yet, two other characterizations also deserve inclusion here:

- Jean-Baptiste Say (1880/1821) viewed the entrepreneur as a coordinator managing the use of scarce economic resources. Say was one of the earliest contributors to theories on entrepreneurship, and arguably many laymen share his view on entrepreneurship.
- McCloskey and Klamer (1995) associate the entrepreneur with, first, envisioning a potentiality to be pursued, and then persuasively communicating that vision to prospective teammates and coordinating the team to actualize that vision.

We find two elements common to all the treatments above. The first of these commonalities is that an interpretive dimension to entrepreneurship is evident. Whether new interpretations are created (Schumpeter) or discovered (Kirzner), they remain somewhat unsettled and open-ended, thus involving uncertainty

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tion: "The entrepreneur is someone who specializes in taking responsibility for and making judgmental decisions that affect the location, form, and the use of goods, resources or institutions" (1989, 47).

4. Risk concerns random events with known probability distributions, while uncertainty concerns random events with unknown probability distributions. Risk is insurable, while uncertainty is not.

(Knight), and requiring communication and persuasive leadership to actualize the potentialities (McCloskey and Klamer). Such matters clearly bear on issues such as resource allocation, ownership, and the theory of the firm (see, e.g., Shane and Venkataraman 2000; Rocha and Birkinshaw 2007; Acs et al. 2009; Kirzner 2009, Henrekson and Johansson 2008; Henrekson and Sanandaji 2014; Audretsch et al. 2015; Foss and Klein 2015; Elert and Henrekson 2016). The second commonality is that the entrepreneurship theorists listed above all consider the entrepreneur an economic actor who is defined according to the economic function that she carries out. The idea is parallel to saying that a lender lends, a professional football player plays football, and so forth.

For our investigation, the particular definition of *entrepreneur* is not critical. Determining whether *any* definition or discussion of the concept is present is sufficient. As such, in our investigation of textbook indexes we searched not only for *entrepreneur* but also for the Schumpeterian terms *innovation* and *invention*. We also searched for the term *institution*, as a substantial literature has found connections between societal institutions and the prevalence of entrepreneurship (North and Thomas 1973; Rosenberg and Birdzell 1986; Acemoglu and Robinson 2012). Institutions affect entrepreneurs' motivation and direct entrepreneurial activities toward productive, unproductive, or destructive use (Baumol 1990). Institutions also mediate the interplay between invention and innovation. New ideas and inventions lead to little economic development unless institutions facilitate their commercialization.

## How we conducted our investigation

Conceptual frameworks are formed by key concepts that, in turn, form a terminology. The formulations that a theory deems important can be understood by studying the prevalence of different concepts and their meanings within the framework of said theory. Textbooks are of particular interest because they generally present established theory. Prominent textbooks tend to be authored by scholars with a strong position within their field.

Doctoral economics programs at U.S. universities generally start with mandatory courses the first year, followed by elective courses the second year, and thereafter writing of the thesis. The first-year courses include econometrics, macroeconomics, and microeconomics. Some universities also require mathematics courses as part of the program. Swedish programs are similar, with mandatory first-year courses in econometrics, macroeconomics, microeconomics, and mathematics, followed by elective courses and writing of the thesis.

The mandatory courses in microeconomics and macroeconomics represent a theoretical core that all doctoral students are expected to know, and we therefore investigate the content of the textbooks and articles used in such courses, seeking to gauge the importance of the concept of entrepreneurship in those courses. Furthermore, we include elective courses in industrial organization, which treats competition, industrial structure, and, possibly, entrepreneurship. We assume that the presence of many page listings for *entrepreneur* in a textbook's subject index or many instances where the word is used in an article indicates that the entrepreneur's economic function plays a prominent role in the field or theory covered, while few or no listings or uses would indicate that entrepreneurship is not considered important for, or at least has not yet been incorporated into, that particular field or theory. Such an approach was suggested by Baumol: "Contrast all this with the entrepreneur's place in the formal theory. Look for him in the index of some of the most noted writings on value theory, in neoclassical or activity models of the firm. The references are scanty and more often they are absent" (1968, 66). Johansson (2004) performed a similar study of leading English-language textbooks in microeconomics, macroeconomics, and industrial organization used in Swedish doctoral programs in economics.

As explained above, we consider the keywords *entrepreneur*, *invention*, *innovation*, and *institutions* in our manual review of textbook indexes. In our analysis of assigned articles, using electronic or manual text search, we consider only *entrepreneur*. We include all variants of each term, e.g., *entrepreneurial* and *entrepreneurship*, and we count the number of unique pages where the term is referenced in the index. For example, if a textbook index contains references to "entrepreneurship and human capital, 236–237" and "entrepreneurship and capital allocation, 237," we record two pages as mentioning entrepreneurship. Also, when we find references to *entrepreneur*, we conduct a qualitative analysis of how the term is used.<sup>5</sup> We also investigate whether or not textbooks and articles that mention entrepreneurship make reference to Schumpeter, Knight, or Kirzner.

We investigated the top ten doctoral programs in economics in the United States:<sup>6</sup> Harvard University, the Massachusetts Institute of Technology (MIT),

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5. In a related study, Phipps et al. (2012) state that the entrepreneur is almost entirely absent in most introductory textbooks in economics. They make a qualitative analysis of the theoretical treatment of the entrepreneur in three introductory textbooks that include a substantial discussion of entrepreneurship; the three textbooks are McConnell and Brue (2008), Baumol and Blinder (2009), and Samuelson and Nordhaus (2010). Diamond (2007a) examines 27 United States microeconomic principles textbooks for references to "Schumpeter" and "creative destruction." In another study, he searches for "Schumpeter" in books sold by Amazon to study the extent to which business practitioners, government policymakers, and voters are exposed to Schumpeter's theory about creative destruction (Diamond 2007b).

6. According to *U.S. News and World Report's* rankings of "Top Graduate Schools in Economics," accessed February 9, 2016 ([link](#)).

Princeton University, the University of Chicago, Stanford University, the University of California at Berkeley, Northwestern University, Yale University, the University of Pennsylvania, and Columbia University. We also covered all economics doctoral programs in Sweden with a full course program: Göteborg University, Uppsala University, Lund University, Umeå University, Stockholm University, and the Stockholm School of Economics.<sup>7</sup>

Treating the academic year 2014–2015, we retrieved general information on doctoral programs from their websites. Gathering the syllabi was not trivial, as most universities publish these documents on closed internal websites. Hence we usually used email requests to obtain textbook and article data, and some courses in the U.S. are excluded due to repeated non-replies to our requests.<sup>8</sup> The textbooks and articles included in our survey are those that are used as core or required reading in the course; if no textbooks or articles are required reading, optional textbooks and articles are included.<sup>9</sup> In this way we identified 37 unique textbooks, all of which we examined, and 532 other unique assigned readings, 515 of which we were able to access and search.<sup>10</sup>

## Results for thirty-seven textbooks

Tabulations for the 37 textbooks in microeconomics, macroeconomics, and industrial organization are shown in Table 1.

Andreu Mas-Colell et al. (1995) is by far the most used textbook, as it is taught in 21 courses. The second and third most used are Lars Ljungqvist and Thomas Sargent (2012) and Hal Varian (1992), which are taught in 12 and 10 courses, respectively. Most textbooks are only used in one course. Eighteen textbooks are only used at U.S. universities, while 11 textbooks are used only at Swedish universities. Textbook usage over time is seemingly somewhat stable. Johansson

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7. Stockholm University and the Stockholm School of Economics jointly operate the Stockholm Doctoral Course Program in Economics, Econometrics and Finance (SPDE). Several other Swedish universities offer Ph.D.s in economics, but these programs do not provide a full course program. Instead, they cooperate with universities that do. Dalarna University, Jönköping University, Karlstad University, Linköping University, Linnaeus University, Södertörn University, and Örebro University cooperate within the Swedish Graduate Program in Economics (Swegpec) to offer a complete course program.

8. All Swedish courses are included. A list of included/excluded courses is available from the authors upon request.

9. Some courses do neither assign required or optional articles.

10. The gross number of non-textbook assigned readings in the syllabi we examined was 595. Of the 595, 63 were not unique (i.e., duplicates), and another 17 were book chapters or other items we could not locate and subject to electronic a search. The full listing is available in a downloadable spreadsheet ([link](#)).

## DOCTORAL PROGRAMS STILL ELIDE ENTREPRENEURSHIP

(2004) identified 19 textbooks, 13 of which are still used, sometimes in a revised edition.

**TABLE 1. Frequency with which four terms appear in thirty-seven textbooks**

Textbook	Book topic	No. of courses using book		Unique pages where topic mentioned			
		U.S.	Swe.	Entrepreneur	Innovation	Invention	Institution
Acemoglu (2009)	Macro	3	2	20	53	0	83
Aghion and Howitt (2009)	Macro	0	1	36	105	0	28
Bewley (2009)	Macro	1	0	0	0	0	0
Blanchard and Fischer (1989)*	Macro	1	1	0	0	0	0
Bolton and Dewatripont (2005)	Micro	2	0	60	0	0	0
Carlton and Perloff (2005)	Industrial organization	1	0	0	4	9	0
Cooley (1995)	Macro	2	0	0	0	0	0
Dixit and Pindyck (1994)	Investment theory	1	0	0	0	0	0
Feldman and Serrano (2006)	Macro	0	1	0	0	0	0
Fudenberg and Tirole (1991)	Game theory	2	0	0	0	0	0
Gali (2008)	Macro	2	2	0	0	0	0
Gibbons (1992)*	Game theory	1	0	0	0	0	0
Hart (1995)	Contract theory	1	0	0	2	0	0
Jehle and Reny (2011)*	Micro	1	0	0	0	0	0
Kreps (2012)	Micro	4	1	0	0	0	0
Krusell (2014/2007)	Macro	0	4	na	na	na	na
Laffont and Martimort (2002)*	Micro	0	1	0	0	0	0
Ljungqvist and Sargent (2012)*	Macro	8	4	0	3	0	0
Luenberger (1969)*	Optimization	1	0	0	0	0	0
Mas-Colell et al. (1995)*	Micro	14	7	1	0	0	0
McAfee and Lewis (2009)	Macro	0	1	na	na	na	na
Myerson (1991)	Game theory	1	0	0	0	0	0
Obstfeld and Rogoff (1996)*	Macro	0	2	0	0	0	0
Osborne and Rubenstein (1994)	Game theory	1	0	0	0	0	0
Pissarides (2000)*	Macro	0	1	0	0	0	0
Romer (2012)*	Macro	3	1	3	0	0	10
Rubinstein (2007)	Micro	1	0	na	na	na	na
Salanié (2005)	Contract theory	0	1	0	0	0	1
Salanié (2011)	Taxation	0	1	1	0	0	0
Stokey and Lucas (1989)*	Macro	7	0	0	0	0	0
Sorensen & Whitta-Jacobsen (2010)	Macro	0	1	0	0	0	6
Tirole (1988)*	Industrial organization	6	0	0	7	0	0
Tirole (2006)	Corporate finance	1	0	0	0	0	0
Uribe and Schmitt-Grohé (2014)	Macro	1	0	na	na	na	na
Varian (1992)*	Micro	2	8	0	0	0	0
Vives (1999)	Industrial organization	0	1	0	0	0	0
Wickens (2012)	Macro	2	0	0	0	0	0
<b>Totals:</b>		<b>70</b>	<b>41</b>	<b>121</b>	<b>174</b>	<b>9</b>	<b>128</b>

*Notes:* \*Covered in Johansson (2004). na = no index is available.

Johansson (2004, 526–527) found few references to the terms investigated, e.g., only two references to the entrepreneur across the 19 books. He also argued that, when references were made, “the meaning and significance of the ideas are lost, diluted, or distorted, compared to entrepreneurship-rich and institution-rich theories.” He concluded that “[i]t is quite obvious that economists have eradicated entrepreneurship and institutions from core PhD training” (*ibid.*, 527).

Similar to Johansson (2004), we observe that concepts related to entrepreneurship and institutional economics are relatively scarce in core subject textbooks in doctoral economics programs. Our conclusions are similar for the United States and Sweden, which is expected given the similarity of the Swedish and U.S. course and program structures.<sup>11</sup>

Twenty-one of the 37 textbooks do not include any references in the subject index to the investigated concepts. “Entrepreneur” is mentioned in the index of six books. Three of those concern macroeconomics: Daron Acemoglu (2009), Philippe Aghion and Peter Howitt (2009) and David Romer (2012). The other three are Mas-Colell et al. (1995) on microeconomics, Patrick Bolton and Mathias Dewatripont (2005) on contract theory, and Bernard Salanié (2011) on taxation.

Compared with the results of Johansson (2004), the main difference is found in the introduction of Acemoglu (2009) and Aghion and Howitt (2009) as course literature. Acemoglu (2009) contains extensive coverage of institutional economics and a moderate amount of discussion of the role of entrepreneurship in economic development. It is in use at three U.S. schools (MIT, Stanford, and the University of Pennsylvania) and two Swedish doctoral programs (SDPE and Uppsala). Aghion and Howitt (2009) includes an extensive discussion of Schumpeterian growth models and institutional economics and is in use in one Swedish program (SDPE).<sup>12</sup>

The most widely used textbook, Mas-Colell et al. (1995), makes one reference to “entrepreneurs,” in an exercise:

Entrepreneurs go to banks to borrow the cash to make the initial outlay (assume for now that they borrow the entire amount). A loan contract specifies an amount  $R$  that is supposed to be repaid to the bank. Entrepreneurs know the type of project they have, but the banks do not. In the event that a project yields profits of zero, the entrepreneur defaults on her loan contract, and the bank receives nothing. Banks are competitive and risk neutral. The risk-free

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11. The four textbooks that do not contain a subject index have been excluded from the analysis. After examining them, we conclude that they do not cover entrepreneurship theories. Thus, excluding them does not have an impact on our conclusions.

12. Philippe Aghion received the Global Award for Entrepreneurship Research in 2016 ([link](#)).

rate of interest (the rate the banks pay to borrow funds) is  $r$ . Assume that...  
(Mas-Colell 1995, 475)

The entrepreneur is not mentioned at all in the fundamental function of Schumpeterian, Knightian, or Kirznerian theory, and these scholars are not included in the text's reference list. Instead, the entrepreneur represents a generic borrower. The terms *innovation*, *invention*, and *institutions* are absent in the subject index.

Salanié (2011) makes one reference to “entrepreneurial capital,” where he writes:

Returns to capital are notoriously risky, unlike the model in this chapter in which  $r$  and  $F_K(t+1)$  were nonrandom. This matters most in that different individuals may be better in investing their assets, and risky returns to capital may also be driven partly by the effort of the investors. The risky returns show up, in particular, in entrepreneurial capital. Entrepreneurial effort generates returns that are highly idiosyncratic, and that are only partly appropriated by entrepreneurs (e.g., because of spillover effects of new knowledge, or the limited duration of patents). The returns to entrepreneurial capital could be subsidized then at least relative to other forms of capital income. (Salanié 2011, 150)

There is no further discussion of the “entrepreneur,” and the term is not mentioned before or after this passage. No references are made to the other concepts investigated. Hence, there is no definition of the entrepreneur that assigns her a distinct economic function that distinguishes the entrepreneur from other actors. Neither Knight nor Kirzner are used as references. The text does not refer to any of Schumpeter's work relevant to entrepreneurship, only invoking him for a commonplace insight on political realism (Schumpeter 1949, 208; quoted in Salanié 2011, 172).

Romer (2012) relates William Baumol's (1990) and Kevin Murphy et al.'s (1991) arguments that society's incentive structure allocates talent toward different uses. He refers to “entrepreneurship” in one paragraph:<sup>13</sup>

Murphy, Shleifer, and Vishny provide a general discussion of the forces that influence talented individuals' decisions whether to pursue activities that are socially productive. They emphasize three factors in particular. The first is the size of the relevant market: the larger is the market from which a talented individual can reap returns, the greater are the incentives to enter a given activity. Thus, for example, low transportation costs and an absence of barriers

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13. Another index page cite is to page 127, which does not mention entrepreneurship but rather patents in the context of endogenous growth.

to trade encourage entrepreneurship; poorly defined property rights that make much of an economy's wealth vulnerable to expropriation encourage rent-seeking. The second factor is the degree of diminishing returns. Activities whose scale is limited by the entrepreneur's time (performing surgeries, for example) do not offer the same potential returns as activities whose returns are limited only by the scale of the market (creating inventions, for instance). Thus, for example, well-functioning capital markets that permit firms to expand rapidly tend to promote entrepreneurship over rent-seeking. The final factor is the ability to keep the returns from one's activities. Thus, clear property rights tend to encourage entrepreneurship, whereas legally sanctioned rent-seeking (through government or religion, for example) tends to encourage socially unproductive activities. (Romer 2012, 120–121)

No explicit reference is made to any distinct function of entrepreneurs that makes them different from other economic actors, for instance, surgeons. Furthermore, the quotation implies an oppositional relationship between entrepreneurship and rent-seeking. Hence, the author overlooks the distinction between productive and unproductive entrepreneurship, which is surprising considering that Romer also refers to Baumol (1990). The very point of Baumol (1990) is to expand Schumpeter's concept of entrepreneurship to include unproductive and destructive activities, and he particularly singles out rent-seeking as an unproductive entrepreneurial activity.<sup>14</sup> Innovation and invention are not mentioned in Romer's subject index. Schumpeter, Knight, and Kirzner are not in the reference list. Four references are made to institutions. The only reference to entrepreneurship is that provided in the quotation above.

Bolton and Dewatripont (2005) make the most references to “entrepreneurs,” using the term extensively over 60 pages. The entrepreneur is again treated as a borrower who borrows from an investor. Innovation and invention are not included in the subject index. Neither Schumpeter nor Kirzner appear in the reference list. Knight is included, but his distinction between risk and uncertainty is not made clear in the text. On the contrary, the concepts of risk and uncertainty are treated synonymously and are used interchangeably. No reference is made to institutions.<sup>15</sup>

Aghion and Howitt (2009) make the second-most references to “entrepreneur,” using it across 36 pages. They develop an alternative model of endogenous growth in which growth is generated by a random sequence of quality-improving innovations. It is called “Schumpeterian” because it attempts to model the process

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14. Productive activities create wealth; unproductive activities redistribute it; and destructive activities (e.g., war enterprises) destroy wealth.

15. One reference to institutional design reads: “Institutional design. See organizational design.” Organizational design concerns itself with the design of workflows in a business context.

that Schumpeter (1950/1942) termed “creative destruction,” i.e., a process in which a new innovation challenges and—if successful—replaces previous structures. The model, a general equilibrium model, assumes that one final good is produced by perfectly competitive firms using labor and a single intermediate product as inputs. The intermediate product is produced by a monopolist in each period. A new agent is introduced:

In each period there is one person (the “entrepreneur”) who has an opportunity to attempt an innovation. If she succeeds, the innovation will create a new version of the intermediate product, which is more productive than previous versions. (Aghion and Howitt 2009, 87)

If innovation succeeds, the entrepreneur becomes a monopolist and receives the monopoly profit from the improved productivity of the intermediate good. This basic setup is then developed in a number of ways, for instance, allowing for general purpose technologies, the effect of trade liberalization on innovation and growth or the environmental impact of innovation. Aghion and Howitt’s presentation of the entrepreneurial function suggests that productivity growth is driven by entrepreneurs’ decisions. But the entrepreneur is simply defined as the agent who makes the research decision and who subsequently obtains the monopoly profit from research investment (note that ‘research’ in this context is a broad term that encompasses many different activities). No distinction is made between invention and innovation, and these activities are combined into a single research-and-development decision. The inventor’s function is consequently not recognized. New combinations are not mentioned, and different types of innovations and their relative importance are not discussed. The one reference to Schumpeter (1934/1912) concerns the importance of financing for firms.<sup>16</sup> It is perhaps telling that Aghion and Howitt (1992), which first outlined the “creative destruction” model of growth, never mentioned the entrepreneur or entrepreneurship.<sup>17</sup>

Acemoglu (2009) treats the causes of growth and particularly the role of institutions and secure property rights in the generation and application of new technology. Technology is not limited to production and production processes; it is instead given a broad meaning that refers to general advances in knowledge. The “entrepreneur” is introduced as follows:

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16. The model can be reconciled with the late Schumpeter, rather than the early Schumpeter. The earlier Schumpeter (1934/1912) emphasized entrepreneurship and the role of new ventures in introducing novel ideas into the economic system. The late Schumpeter (1950/1942) emphasized large firms and economies of scale in production and research and development.

17. Aghion and Howitt have developed the Schumpeterian growth framework further since the publication of their textbook (for overviews of their current work on entrepreneurship, see Aghion 2017; Aghion et al. 2015a; b). Hence, future updates to the textbook might incorporate a richer view of entrepreneurship.

Consider the problem of a single entrepreneur with a risk-neutral objective function

$$\sum_{t=0}^{\infty} \beta^t c(t)$$

This entrepreneur's consumption is given by the income he generates in that period (there is no saving or borrowing). If the entrepreneur uses an idea of quality  $a(t)$ , he can then produce income equal to

$$y(t) = a(t)$$

at time  $t$ . At  $t=0$ , the entrepreneur starts with  $a(0)=0$ . From then on, at each date, he can either engage in production using one of the techniques he has already discovered or spend that period searching for a new technique. Let us assume that each period in which he engages in such a search he gets an independent draw from a time-invariant distribution function  $H(a)$  defined over a bounded interval  $[0, a]$ .

Therefore the decision of the entrepreneur at each date is whether to search for a new technique or to produce with one of the techniques he has discovered so far. Since there is no saving or borrowing, the entrepreneur simply consumes his current income  $c(t)=y(t)$ . (Acemoglu 2009, 556–557)

The framework is similar to that presented in Aghion and Howitt (2009). Acemoglu refers to both early and late Schumpeter, but he presents no explicit definition of the entrepreneur and does not discuss the entrepreneur's economic function in any depth. Acemoglu does occasionally distinguish between invention and innovation in the text, without defining the terms explicitly. Institutions and their importance for entrepreneurship and economic growth are discussed at length.

While innovation is covered in a few textbooks in macro and industrial organization, invention is never mentioned in the index of those books, with the exception of Carlton and Perloff (2005), indicating that the distinction between coming up with a novel idea and commercializing that idea is not made.

Only five books refer to institutions in their indexes. Acemoglu (2009) and Aghion and Howitt (2009) have many references to the topic, 83 and 28 respectively. Acemoglu particularly emphasizes institutional factors as fundamental in explaining economic growth. Romer (2012) refers to institutions on 10 pages, Salanié (2005) on one, and Peter Sørensen and Hans Whitta-Jacobsen (2010) on six.

None of the 37 textbooks clearly defines the entrepreneur or the entrepreneur's economic function.<sup>18</sup> Acemoglu (2009) and Aghion and Howitt (2009) are

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18. This is in line with Ferrarini et al., who in their investigation of Advancement Placement (AP) course exams in microeconomics and macroeconomics, conclude that: "The vitally important roles of secure

partial exceptions to this rule, as their Schumpeterian growth models relate the entrepreneur to innovation and creative destruction, although without getting into deeper theoretical discussions with regard to the entrepreneur's economic function. The examined textbooks also do not cite previous works on the history of the thought on entrepreneurship such as Mark Blaug (1986), Humberto Barreto (1989), or Robert Hébert and Albert Link (1989). All textbooks fall well within the mainstream paradigm of equilibrium modeling. Acemoglu (2009), for instance, closes the substantive portion of his first chapter with this paragraph:

Our next task is to systematically develop a series of models to understand the mechanics of economic growth. I present a detailed exposition of the mathematical structure of a number of *dynamic general equilibrium models* that are useful for thinking about economic growth and related macroeconomic phenomena, and I emphasize the implications of these models for the sources of differences in economic performance across societies. Only by understanding these mechanics can we develop a useful framework for thinking about the causes of economic growth and income disparities. (Acemoglu 2009, 23, our emphasis)

According to Barreto (1989), Baumol (2006), Hébert and Link (2007), Winter (2016), Milo Bianchi and Magnus Henrekson (2005), and others, economists are not able to 'fit' the entrepreneur into equilibrium models. The main potential challenge to this argument is posed by Schumpeterian growth models, particularly if they develop in a way that enables them to capture more aspects of the entrepreneurial function. We observe a development over time, where the entrepreneur is not found in older textbooks (as covered in Johansson 2004) but tends to be included in more recent ones. One possible explanation for this finding is that growth theory has undergone a development from exogenous growth to endogenous growth and then tentatively to Schumpeterian growth models. If this interpretation is correct, we will expect the entrepreneur to make more frequent appearances in future textbooks.

We turn now to the 515 articles that were assigned in the courses examined and that we were able to search. Twenty-seven of these articles mentioned *entrepreneur* or a variation (*entrepreneurial*, etc.). These mentions sometimes referred to the entrepreneur as an important actor in an economic model. However, there was no discussion of the entrepreneur's economic function. None of the articles that mention the entrepreneur refers to Kirzner. Robert Lucas's "Understanding Business Cycles" (1977) is the only article that refers to the entrepreneur and also

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property rights, dynamic competition, entrepreneurship, and innovation as sources of growth and prosperity are almost totally ignored by AP economics" (2011, 71).

refers to Knight. Lucas speaks of the entrepreneur in the role of employer; the article does not refer to Schumpeter (1939) or the role of entrepreneurs and creative destruction in causing business cycles. The only article that cites Schumpeter while also mentioning entrepreneurship is Margaret Levenstein and Valerie Suslow (2006). Their paper makes a single use of “entrepreneurs” (in a quotation) and also references Schumpeter (1950/1942). The article does not however refer to Schumpeter’s concepts of entrepreneurship. We provide a list of the non-textbook items found on the syllabi, indicating the articles that we examined, plus a list of those that mention the entrepreneur or that cite Schumpeter, in a downloadable spreadsheet ([link](#)).

Also, we find that, with rare exceptions, courses in entrepreneurship are absent in both countries. In the U.S., only Harvard University offers an elective doctoral-level economics course in entrepreneurship. The University of Chicago, Stanford, and Berkeley offer courses in the related area of innovation and creativity. In Sweden, only Jönköping University offers courses in entrepreneurship. Jönköping is also the only Swedish economics Ph.D. program to offer a course in innovation. These courses are not economics courses, and they are taught by teachers in management and business administration.<sup>19</sup> This reflects that entrepreneurship is a flourishing field of research in business programs.<sup>20</sup>

## Concluding remarks

Coverage of entrepreneurship is rare in textbooks and articles that are used in core doctoral courses in economics. When used, the concept is generally not given a clear definition that is grounded in established definitions, such as the entrepreneur’s role in creatively introducing new combinations of factors of production (Schumpeter), discovering opportunities (Kirzner), or bearing uncertainty (Knight). We also conclude that the Schumpeterian division of the economic development process into invention and innovation is not used in core economics textbooks. While innovation is occasionally discussed, invention is not. When entrepreneurship is omitted, not differentiating between the two is logical. The entrepreneur is the link between a novel idea (invention) and its commercialization

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19. Considering the importance of institutions it may be interesting to note that only MIT, Stanford, Berkeley, and Yale offer various courses in institutional economics. In Sweden, only Lund University offers a course related to institutional economics, although it focuses only on institutions in the Chinese economy.

20. Entrepreneurship is often used synonymously with starting a new business in this literature, which is not a use compatible with the most commonly used theories of entrepreneurship (Henrekson and Sanandaji 2014).

(innovation), and clarifying a distinction between these activities is difficult if the entrepreneurial function is absent. Neglect of entrepreneurship partly explains the strong emphasis on research and development as the primary determinant of growth in growth modeling.

Most textbooks do not refer to institutions, with the exception of Acemoglu (2009) and Aghion and Howitt (2009), who give this concept significant attention. Issues related to entrepreneurship, the institutional context, and the interplay of the two are generally left out or considered peripheral. This picture is confirmed by our analysis of course offerings. Some elective courses in entrepreneurship, institutional economics, and innovation exist in economics doctoral programs, but they are scarce.

The few textbooks that include the entrepreneur do not clearly define her economic function, do not recognize the difference between invention and innovation, and do not provide a nuanced discussion of different types of innovations.<sup>21</sup> Hence, current textbooks lack many of the basic insights that, for instance, Schumpeter (1934/1912) provided us.

However, some signs indicate that the entrepreneur is once again receiving serious attention in economics. Two of the newer macroeconomics textbooks—again Acemoglu (2009) and Aghion and Howitt (2009)—include a more ambitious treatment of entrepreneurship than earlier textbooks. The extent of the coverage given to the entrepreneur's economic role is still limited in many ways, but the presence of serious attempts to model the role of entrepreneurship in the growth process may point to a renewed interest in the topic.

In response to our analysis it might be argued that textbooks in microeconomics, macroeconomics, and industrial organization are not the occasion for rich learning about economic processes that lie outside of the optimizing-agent approach. But we have also examined assigned articles, and again mention of entrepreneurship is scant.

In their quest for economic insight, doctoral students interested in the causes of economic development may look beyond their university training. A little entrepreneurship can make a world of difference.

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21. More specifically, there is a heavy focus on technological innovation, and little attention is paid to non-technological forms of innovation, or to the dispersion and adaptation of innovations to new markets.

## Appendix: Course textbooks by university and course

<b>Harvard</b>	
Econ 2010a (Micro)	No reply
Econ 2010b (Micro)	Mas-Colell et al. (1995); Bolton & Dewatripont (2004); Hart (1995); Tirole (2006)
Econ 2010c (Macro)	Stokey & Lucas (1989); Dixit & Pindyck (1994)
Econ 2010d (Macro)	Blanchard & Fischer (1989); Gali (2008); Cooley (1995)
Econ 2610 (IO)	No textbook
Economics 2611 (IO)	No textbook
<b>MIT</b>	
14.121 (Micro)	Mas-Colell et al. (1995); Kreps (2012)
14.122 (Micro)	Tirole (1988)
14.451 (Macro)	Stokey & Lucas (1989)
14.452 (Macro)	Acemoglu (2009)
14.271 (IO)	Tirole (1988)
14.272 (IO)	No textbook
14.273 (IO)	No textbook
<b>Princeton</b>	
Eco 501 (Micro)	Gibbons (1992)
Eco 502 (Micro)	Mas-Colell et al. (1995); Bolton & Dewatripont (2004)
Eco 503 (Macro)	Ljungqvist & Sargent (2004); Stokey & Lucas (1989)
Eco 504 (Macro)	Ljungqvist & Sargent (2012)
Eco 541 (IO)	No textbook
Eco 542 (IO)	No textbook
<b>U. of Chicago</b>	
Econ 30100 (Micro)	No reply
Econ 30200 (Micro)	No reply
Econ 30300 (Micro)	Mas-Colell et al. (1995); Jehle & Reny (2011); Myerson (1991)
Econ 33000 (Macro)	No reply
Econ 33100 (Macro)	No reply
Econ 33200 (Macro)	No reply
Econ 40101 (IO)	Tirole (1988); Carlton & Perloff (2005)
Econ 40201 (IO)	No textbook
Econ 40301 (IO)	No textbook
<b>Stanford</b>	
Econ 202 (Micro)	Mas-Colell et al. (1995); Kreps (2012); Varian (1992)
Econ 203 (Micro)	Mas-Colell et al. (1995); Fudenberg & Tirole (1991); Tirole (1988)
Econ 204 (Micro)	Mas-Colell et al. (1995); Kreps (2012); Varian (1992)
Econ 210 (Macro)	Stokey & Lucas (1989); Ljungqvist & Sargent (2012); Luenberger (1968)
Econ 211 (Macro)	Acemoglu (2009)
Econ 212 (Macro)	Ljungqvist & Sargent (2012)
Econ 257 (IO)	Tirole (1988); Vives (1998)
Econ 258/259 (IO)	No textbooks
Econ 260 (IO)	No textbooks

DOCTORAL PROGRAMS STILL ELIDE ENTREPRENEURSHIP

<b>UC Berkeley</b>	
Econ 201A (Micro)	Kreps (2012); Mas-Colell et al. (1995); Rubinstein (2007)
Econ 202A (Macro)	Romer (2011)
Econ 201B (Micro)	Osborne & Rubenstein (1994)
Econ 202B (Macro)	Romer (2011); Galí (2008)
<b>Northwestern</b>	
Econ 410-1 (Micro)	No reply
Econ 410-2 (Micro)	Mas-Colell et al. (1995)
Econ 410-3 (Micro)	Mas-Colell et al. (1995)
Econ 411-1 (Macro)	Stokey & Lucas (1989); Ljungqvist & Sargent (2012)
Econ 411-2 (Macro)	No reply
Econ 411-3 (Macro)	Stokey & Lucas (1989); Ljungqvist & Sargent (2012)
Econ 450-1 (IO)	Tirole (1988); Vives (1998)
Econ 450-2 (IO)	No textbook
Econ 450-3 (IO)	No textbook
<b>Yale</b>	
Econ 500a (Micro)	Mas-Colell et al. (1995); Bewely (2007)
Econ 501b (Micro)	Fudenberg & Tirole (1991); Mas-Colell et al. (1995)
Econ 510a (Macro)	No reply
Econ 511b (Macro)	Ljungqvist & Sargent (2012); Romer (2011)
Econ 600a (IO)	No textbooks
Econ 601b (IO)	No textbooks
<b>U. of Pennsylvania</b>	
Econ 701 (Micro)	Mas-Colell et al. (1995)
Econ 703 (Micro)	Mas-Colell et al. (1995)
Econ 702 (Macro)	Ljungqvist & Sargent (2012); Stokey & Lucas (1989)
Econ 704 (Macro)	Acemoglu (2009); Cooley (1995)
Econ 781-001 (IO)	No textbook
<b>Columbia</b>	
G6211 (Micro)	No reply
G6212 (Micro)	No reply
G6215 (Macro)	No reply
G6216 (Macro)	Uribe & Schmitt-Grohé (2014)
G6253x (IO)	No textbook
G6254x (IO)	No textbook
G6255y (IO)	No textbook
<b>Lund</b>	
NEKN21 (Micro)	Varian (1992)
NEKP21 (Micro)	Mas-Colell et al. (1995)
NEKN41 (Macro)	Sørensen & Whitta-Jacobsen (2010)
NEKP42 (Macro)	Obstfeld & Rogoff (1996)
<b>Jönköping</b>	
Microeconomic Theory 1	Jehle & Reny (2011); McAfee & Lewis (2009); Varian (1992)
Microeconomic Theory 2	Feldman & Serrano (2006)
Microeconomic Theory 1	Romer (2011)
Microeconomic Theory 2	Obstfeld & Rogoff (1996)
<b>Göteborg</b>	
Microeconomics I	Varian (1992); Mas-Colell et al. (1995)
Microeconomics II	Varian (1992); Mas-Colell et al. (1995)
Macroeconomics I	Krusell (2014/2007); Ljungqvist & Sargent (2012)
Macroeconomics II	Krusell (2014/2007); Ljungqvist & Sargent (2012)

<b>Stockholm</b>	
Microeconomics I	Mas-Colell et al. (1995); Jehle & Reny (2011); Kreps (2012)
Microeconomics II	Mas-Colell et al. (1995); Laffont & Martimort (2002)
Macroeconomics I	Krusell (2014/2007); Acemoglu (2009); Aghion & Howitt (2009); Ljungqvist & Sargent (2012)
Macroeconomics II	Krusell (2014/2007); Ljungqvist & Sargent (2012); Pissarides (2000); Galí (2008)
Industrial organization	Cancelled
<b>Uppsala</b>	
Microeconomics I	Varian (1992); Mas-Colell et al. (1995)
Microeconomics II	Salanié (2011); Varian (1992); Salanié (2005); Mas-Colell et al. (1995)
Macroeconomics I	Wickens (2012); Acemoglu (2009)
Macroeconomics II	Galí (2008)
<b>Umeå</b>	
D9 (Micro)	Varian (1992)
D10 (Micro)	Varian (1992)
D22 (Macro)	Romer (2011)
D23 (Macro)	Blanchard & Fischer (1989)

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## About the Authors



**Dan Johansson** obtained his Ph.D. in Economics at the Royal Institute of Technology in 2001 with the thesis *The Dynamics of Firm and Industry Growth: The Swedish Computing and Communications Industry*. He holds a Licentiate degree in Economics from the Stockholm School of Economics and received the title of Associate Professor (*docent*) at Jönköping University in 2007. Since 2013, he is Professor of Economics at the Örebro University School of Business. He is also a research fellow at HUI Research, Stockholm. His research concerns entrepreneurship, family business, firm growth and institutions. He has published in *Family Business Review*, *Industrial and Corporate Change*, *Journal of Evolutionary Economics*, *Journal of Industry, Competition and Trade*, and *Small Business Economics*. His email address is dan.johansson@oru.se.



**Arvid Malm** is a doctoral student at the Royal Institute of Technology in Stockholm and a researcher at Swedish Entrepreneurship Forum. He holds a master of science degree in economics from the Stockholm School of Economics. He has previously been chief economist at the Swedish Taxpayer’s Association. His research interests are focused on high-impact entrepreneurship and labor economics, examining the effect of entrepreneurship on the distribution of income, the impact of education on entrepreneurship, and the relationship between entrepreneurship and philanthropy in Sweden. His email address is arvid.malm@indek.kth.se.

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# Classical Liberalism in China: Some History and Prospects

Xingyuan Feng<sup>1</sup>, Weisen Li<sup>2</sup>, and Evan W. Osborne<sup>3</sup>

[LINK TO ABSTRACT](#)

Classical liberal economic ideas such as respect for property, competition, freedom of contract, and the rule of law, along with the associated institutions, have played an important role in Western history as well as in other countries, especially from the eighteenth century (North et al. 2009; Hayek 1978). In China the rise of such legal and social institutions has been credited with the immense economic progress of the last four decades (Feng et al. 2015; Coase and Wang 2012).

Although market institutions stretch back many centuries in China (von Glahn 2016), much of the twentieth century was marked by admiration and adoption of uncompromising communism, including Maoism. While other countries in that part of the world prospered after World War II based on free markets and the gradual institutionalization of the rule of law, China suffered three decades of both political and economic catastrophe after 1949. Much of the modern Chinese ‘economic miracle,’ i.e., rapid, stable, and continuing economic growth since the late 1970s, is also substantially traceable to the implementation of liberal reforms (Feng et al. 2015). The reforms instituted much of the structure of a functioning price system, a relatively stable currency, meaningful property rights, increased competition, increased enforcement of contract and liability law, and reasonably steady economic policy (cf. Eucken 1952). The gradual replacement of state-directed production and resource-allocation decisions with spontaneous-order

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1. Research Institute of Economic Thought and Economic History, Fudan University, 200433 Shanghai, China. The authors would like to thank Ning Wang and two anonymous referees for valuable comments. All remaining errors are ours alone.

2. Fudan University, 200433 Shanghai, China.

3. Wright State University, Dayton, OH 45435.

processes opened the door to participation and hence prosperity for ordinary Chinese people, including those who had been historically relegated to the bottom of the social ladder. The reforms opened the way for pioneers, and in the words of Ronald Coase and Ning Wang, the “pioneers were not state-owned enterprises, the privileged actors and the jewels of socialism, but the disadvantaged and marginalized” (2012, 45). There are few if any observers who fail to significantly credit substantial economic liberalization for the Chinese miracle, just as with the broader East Asian miracle before it. And yet abundant literature in China and elsewhere gives paramount credit to the so-called “Chinese model,” in which government is credited with steering economic activities while maintaining political control over society (Zhang 2016; 2012; Pan 2007). This paper traces the development and current position of classical liberalism in China, with a focus on Chinese economic thought.

## Classical liberalism in modern Chinese society

The Chinese characters for *freedom* or *liberty* are 自由 (Mandarin pronunciation: *zìyóu*), and the two characters combined can be roughly translated as ‘emanating from the self.’ The first written record of the term appeared in a poem anonymously written in roughly 200 CE, whose title is translated into English among other ways as “An Ancient Poem Written for the Wife of Jiao Zhongqing” (in Barnstone and Chou 2005, 45–56). The term was used therein by a mother to criticize her daughter-in-law, and had a negative connotation akin to ‘self-willed, and therefore disrespectful.’ Its modern usage grew along with the urgency to acquire the national capacity to resist Western colonial efforts. Figure 1 presents usage frequency for 1800–2008 from Google Ngrams, a database containing the frequency of specific *n*-grams—*n*-grams being phrases of particular lengths in words (lengths in characters, in the Chinese case)—found in the pages of all books in a variety of languages that Google has digitized.<sup>4</sup> The figure depicts the proportion of all Chinese 2-grams in a given year, as a three-year moving average, that the specific 2-gram *zìyóu* makes up. The figure indicates that the prevalence of *zìyóu* increased dramatically in the late nineteenth and early twentieth centuries, i.e., the late Qing Dynasty and early Republican period. This happened as the overall amount of publication in China grew dramatically during this time, both because of debates over how to modernize and because of the abandonment of the difficult classical written Chinese for writing that resembled spoken Chinese (*báihuà*, 白话).

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4. For example, ‘comparative advantage’ is a 2-gram, and ‘division of labor’ a 3-gram.

Presumably during this interval the term was rapidly acquiring the meaning of the English word *liberty*.

**Figure 1.** Prevalence of 自由 (‘freedom’) in Chinese books, 1800–2008



Source: Google Books Ngram Viewer ([link](#)).

In modern Chinese, *zìyóu zhǔyì* (自由主义) translates alternatively as ‘liberalism’ or ‘libertarianism.’ But during the Maoist era in both scholarship and in politics, *zìyóu zhǔyì* was seen as the dominant ideology of capitalist countries and thus as decadent. That view surely was a function of the Marxist vision of bourgeois liberalism as the final stage of capitalism. Mao Zedong himself in 1969, at the height of the Cultural Revolution, republished in a selection of his works a 1937 essay called “Against Liberalism” (“Fǎnduì zìyóu zhǔyì,” “反对自由主义”). It criticized non-obedience to the communist party leader as such corrupt “liberalism” (Mao 1969). This loaded usage has, unfortunately, influenced the way some Chinese see the term 自由主义 ever since.

Since 1949 China has been a one-party state, and the Communist Party of China (CCP) has supposedly been building, depending on the current political line, a communist or socialist country. Currently, to accommodate the explosion in market activity since 1978, its system is described by the CCP as “socialism with Chinese characteristics” (“zhōngguó tèsè shèhuì zhǔyì,” “中国特色社会主义”). Chinese social-science and historical scholarship is still laden with articles describing social phenomena from an orthodox Marxist (though less often Maoist these days) perspective. The general public and even many at senior levels of the CCP do not take such beliefs seriously. However, if ‘socialism’ is taken to signify vague notions of equality of income distribution and social position, it is widely accepted in China, as to a lesser extent it is in Europe and the United States. In China, objections to inequality certainly long predate the twentieth century and

its imported ideologies. Even Confucius identified a similar mentality among successful Chinese political rulers.<sup>5</sup>

But thorough understanding of liberalism, let alone support for liberal views, is still rare in today's China. The former is in fact confined to a small number of Chinese intellectuals. Many Chinese do have some sense of the merits in such terms as freedom, democracy, legal equality, and especially justice and the rule of law. Even leading political figures have discussed the importance of the rule of law (*fǎzhì*, 法治). But since the liberal heritage is weak, few people have a deep understanding of such ideas. Instead, people are likely to associate the terms with the good governance, prosperity, and cleaner natural environment they believe to be found in Western countries. To live in such a country, many believe, is to live in a place where opportunities for people like them are greater and where security and happiness are much easier to achieve. The CCP has been concerned enough about the spread of such admiration for the terms of liberalism that on November 19, 2012, in the report of the 18th Party Congress, the CCP's proclamation of so-called "socialist core values" included a number of such liberal terms. Through various propaganda mechanisms these values have subsequently been promoted across the country. Note that the attraction of these values is in contrast to a widespread Chinese disquiet about the immediate introduction of democracy in the sense of cleanly counted, competitive elections. China has been an authoritarian country for more than 2,000 years. It has no democratic traditions, a general skepticism of common, less-educated people having a significant say in national affairs, and a fear of the spread of separatist thinking and even the outbreak of civil war, not a rare event in Chinese history.

Since 1978, economic thought in China, apart from some Marxist redoubts, has come to resemble that in much of the rest of the world. The Chinese government through its state statistics bureau collects data with the goal of monitoring and as necessary improving Chinese macroeconomic performance. The People's Bank of China, the country's central bank, operates on substantially the same principles as central banks in developed countries. Perhaps the Chinese are prepared for the distinct ideas of classical liberalism. But liberalism is not seen by many as a significant, distinctive school of thought there, let alone a particularly valuable one. Other modern ideas in contrast have been widely absorbed in the Chinese

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5. Confucius says to Qiu, in the *Analects*: "The gentleman detests those who, rather than saying outright that they want something, can be counted on to offer a plausible pretext instead. What I have heard is that the head of the state or a noble family worries not about underpopulation but about uneven distribution, not about poverty but about instability. Where there is even distribution there is no such thing as poverty, where there is harmony there is no such thing as underpopulation and where there is stability there is no such thing as overturning. It is for this reason that when distant subjects are unsubmissive one cultivates one's moral quality in order to attract them, and once they have come one makes them content."

collective consciousness, for example modernization (*xiàndàihuà*, 现代化), or environmentalism (*huánbǎo*, 环保). Yet many of liberalism's principles have antecedents in Chinese thought, and after Western quasi-colonialism began in the mid-nineteenth century, several liberal texts were among the larger set of books enthusiastically translated into Chinese.

## Elements of liberalism in ancient Chinese thought

Chinese political thought long took an absolute ruler for granted, and so political philosophy emphasized advice to that sovereign on how to rule in order to promote the general welfare and prevent revolt. But there certainly is in the Chinese philosophical and historical corpus significant thinking on economic matters. To be sure, there is a tradition of disdain for commercial activity, sometimes paired with advice on how to cultivate individual rectitude. During the Warring States period (475–221 BCE), the *Book of Lord Shang*, a record of the thoughts of a contemporaneous chief minister, told of his distinguishing between farming, a fundamental activity (*běnyè*, 本业), and the derivative, secondary activity of commerce (*mòyè*, 末业). The Confucianist philosopher Mencius (c. 372–289 BCE) sometimes and the Legalist Han Feizi (c. 280–233 BCE) usually took a dim view of commerce—the former because it was corrupting of human nature, and the latter because concentration of wealth in the hands of a few merchants posed a threat to the state. Han Feizi did speak of self-interest inducing win-win exchanges, and both Mencius and before him Mozi (c. 468–391 BCE) wrote of the foolishness of war. Mozi also particularly emphasized the importance of at least a simulacrum of the rule of law, arguing for the importance of the moral equality of all individuals regardless of social status (Osborne 2012).

There is also a record of advocacy for a liberal economic order, not least in the text known as the *Guanzi*. Long attributed to a seventh-century BCE pre-Chinese-unification minister in the state of Qi named Guan Zhong, the text generally concerns philosophical matters, but there is economic wisdom to be found in it as well. For liberal economic values, two sections are of interest. In one, the author anticipates and even extends *ex ante* the eighteenth century argument of A. R. J. Turgot and Adam Smith that rates of return will tend to equalize across activities: “Town and country compete for inhabitants; families and public storehouses compete for goods; gold and grain compete for value; countryside and court compete for power” (quoted in von Glahn 2016, 78 n.94; our translation).

Another theme in the *Guanzi* is the economic role of merchants being truly fundamental and not merely derivative (note the contrast with the later, skeptical depiction of mercantile activity outlined above):

Merchants observe outbreaks of dearth and starvation, scrutinize changes in the fortunes of states, study the patterns of the four seasons, and take notice of what goods are produced in each place. With this knowledge of prices in the marketplace, they gather up their stock of goods, load them on ox carts and horses, and circulate throughout the four directions. Having reckoned what is abundant and what is scarce and calculated what is precious and what is worthless, they exchange what they possess for what they lack, buying cheap and selling dear... Marvelous and fantastic things arrive in timely fashion; rare and unusual goods readily gather. Day and night thus engaged, merchants tutor their sons and brothers, speaking the language of profit, teaching them the virtue of timeliness, and training them how to recognize the value of goods. (quoted in von Glahn 2016, 78)

The importance of scattered, costly information—strongly hinted at in the above passage from the *Guanzi*—was not laid out until the early modern era in the West.

Taoism, philosophical tracts of which have been traced back to the fourth century BCE, also modestly overlaps with classical liberal values. An undercurrent of the Taoist view of the world is that things are what they are for a reason. Strands of Taoist thought also advocate unhindered individual creativity. In that sense it resembles a bit modern ideas of spontaneous order. Indeed, Tan Min (2014, 90) notes that François Quesnay referred to China as a country where government was “built upon the basis of the natural laws.” In 1767’s *Despotisme de la Chine*, Quesnay rebutted Montesquieu’s criticism in *The Spirit of the Laws* of Chinese “despotism” (ibid., 91).

During the Han dynasty, the writer Sima Qian (c. 145–86 BCE), in a volume that later became part of his *Records of the Grand Historian of China* (Sima 1961), devoted attention to the various distinct regional economies of which he was aware, and to those who were financially successful in them. Sima discussed both the role of merchants and of prices in eliciting goods to be produced, or moved from where they are less desired to where they are more desired. He also argued private incentives were sufficient to do most of what it made sense to do:

Society obviously must have farmers before it can eat; foresters, fishermen, miners, etc., before it can make use of natural resources; craftsmen before it can have manufactured goods; and merchants before they can be distributed. But once these exist, what need is there for government directives, mobilizations of labor, or periodic assemblies? Each man has only to be left to utilize his own abilities and exert his strength to obtain what he wishes. Thus, when a

commodity is very cheap, it invites a rise in price; when it is very expensive, it invites a reduction. When each person works away at his own occupation and the lights in his own business then, like water flowing downward, goods will naturally flow forth ceaselessly day and night without having been summoned, and the people will produce commodities without having been asked. (Sima 1961, 477)

Adam Smith could not have said it better himself, and in the 1990s there was an exchange of articles contending over whether Sima Qian anticipated much of what Smith introduced to Western thought (Young 1996; McCormick 1999).

Subsequently in the same work, Sima contended:

These, then, were examples of outstanding and unusually wealthy men. None of them enjoyed any titles or fiefs, gifts, or salaries from the government, nor did they play tricks with the law or commit any crimes to acquire their fortunes. They simply guessed what course conditions were going to take and acted accordingly, kept a sharp eye out for the opportunities of the times, and so were able to capture a fat profit. (Sima 1961, 498)

While *Records* has long been considered a classic, this particular insight left little trace in later Chinese writings on economics, so that when Smith himself was finally translated into Chinese his insights were thought to be revolutionary.

The degree to which actual policy conformed to the recommendations of liberalism fluctuated greatly. As far back as the Warring States period there was an identifiable class of merchants, but they worked with rulers, to “assist them in gathering and centralizing control over economic resources” (von Glahn, 2016 46)—different in methods but not in fundamental goals from the mercantilist corporations, guilds, and other institutions that would be roundly criticized by Smith. Yet the merchant Bai Gui (c. 463–385 BCE) was recruited to serve as a political leader in the state of Wei and was able to achieve significant reductions in customs duties and bureaucratic complexity (Hu 1988). Sometimes even a change of emperor within a dynasty could make a significant difference. The Taoist second-century-BCE Han emperor Wen (202–157 BCE) is generally held to have ruled very liberally, reducing taxes, reforming the criminal law and largely introducing the exam system for choosing bureaucratic officials that would be used until 1905. But his successor’s successor and grandson, the emperor Wu (156–87 BCE) reimposed centralized rule with state direction of economic activity. Evidence indicates that during his rule the urban population of China declined, a number of Chinese cities de-complexified, and agriculture significantly displaced mercantile commerce (Yamada 2000).

Several times subsequently, economic policy changed direction between liberal and illiberal regimes. It seemed to rulers that controlling prices in the very short term made things better for the poor, but of course also caused quantities supplied to dry up. Freedom for merchants was associated with vibrant economies and prosperity for those officially connected to trade networks, but it also generated seemingly dangerous declines in the uniformity of income. In addition, the Confucian legacy of disdain for the commercial life and lauding of family and hierarchy periodically fueled changes toward less liberalism. But to speak approximately, as in literature and the arts, the Song dynasty (960–1279 CE) was in terms of material prosperity a golden age, and a liberal one to boot. Philosophically, while there was nothing directly resembling the fuller package of Western economic liberalism, during this time neo-Confucian scholars such as Zhu Xi (1130–1200) indirectly promoted limited government by reviving the Confucian tradition of calling rulers to account for lack of individual rectitude. That practices of self-cultivation are both essential to ruling justly and accessible to people of any station has been a long tradition in Chinese thought. But after the collapse of the Song dynasty and the following century of subsequent Mongol rule, the first Ming emperor after taking power in 1368 sought to restore the autarkic villages lionized by Mencius and subsequent neo-Confucian philosophers.

In later centuries, enough data exist to document several episodes of prolonged economic stagnation: both an unnamed depression and the Kangxi depression between the 1630s to the 1690s (Atwell 1999), and the Daoguang depression from the 1820s to the 1840s (von Glahn 2016), the former two straddling the period during which the Ming dynasty fell. While the second stagnation occurred while the authority of the final dynasty, the Manchu Qing, was still strong, it was followed by the roughly 70 years in which contact with Western militaries in possession of mass-produced weaponry ultimately ended the imperial system—but not before provoking intense interest in Western ideas.

Thus there were many examples scattered over the centuries of individual ideas also found in classical liberalism, as one would expect of a civilization with as long a history and as much complexity as China. But there was no coherent philosophy of classical liberalism in the sense of other Chinese schools of thought such as Legalism and Confucianism. That would soon change.

## China faces the West and its political economy

During the nineteenth century, a sequence of increasingly alarming events gradually caused a belief to grow that China was now demonstrably behind the countries of the West, which were no longer so distant from Chinese conscious-

ness. The Chinese military was defeated in two ‘Opium Wars’—first by Britain in 1839–1842 and then by primarily Britain and France during 1856–1860. At the end of the second war the two so-called Summer Palaces in the Beijing area were both looted and burned, after the Chinese government had executed several British captives. The second Opium War was enveloped by the purely domestic but far more catastrophic Taiping rebellion from 1850–1864, in which millions died. As the second half of the century unfolded, the Qing Government had to make repeated concessions to British, French, Japanese, Russian, German, and American powers with regard first to war reparations and later the granting of privileges such as the right to construct railways, and to establish colonies in Shanghai and elsewhere. Particularly motivating was the Chinese loss to Japan in the brief Sino-Japanese War of 1894–1895, after a much smaller Japan had successfully incorporated Western technology and military strategy on their own within 40 years after initial (also hostile) Western contact.

By this time, China already had a long tradition of translation, especially of Sanskrit Buddhist texts and, starting in the late sixteenth century, of the Latin texts of Jesuits, who were then well ensconced in a few places in China. From 1723, when the Jesuits were expelled, to the loss in the first Opium War, translation effectively stopped. But by 1880 the translation of scientific texts resumed and then expanded, in part because Westerners were then teaching religious, scientific, and social-scientific Western knowledge through formal schools. In addition, there was now increasing Chinese emigration to the countries of the Western Hemisphere, and some of these Chinese went abroad specifically to master Western languages and ideas.

One of the most influential of these latter was Yan Fu (1854–1921), the single most important introducer of liberal ideas in China, who was educated in England at a naval school established in 1866 by the Qing but where most of the teachers were Westerners. Between 1877 and 1879 he lived in England, where he was thoroughly exposed to English-language Western texts. After the Treaty of Shimonoseki that ended the war with Japan, he began to translate many works containing what he saw as the knowledge that was key to Western strength, knowledge that had been absorbed by Japan. While there were many strains of thought contending in the contemporary West, including liberalism, Darwinian evolution, pragmatism, and Marxism, looking back it is striking how important Yan thought that liberal thinking was and liberal thinkers were in explaining Western power. In addition to *The Wealth of Nations*, Yan translated Thomas Huxley’s *Evolution and Ethics* (the title of which he chose to translate as *Tiānyǎnlùn*, or 《天演论》, meaning *Theory of Evolution*), Herbert Spencer’s *The Study of Sociology*, John Stuart Mill’s *On Liberty* (his translation of the title being *Qúnjǐquánjièlùn*, or 《群己权界论》, *On the Boundary Between the Self and the Group*) and *A System of Logic*,

Edward Jenks's *A History of Politics*, Montesquieu's *The Spirit of the Laws*, and William Stanley Jevons's *A Primer of Logic* (all collected in Yan 2014).

Some have argued that the spirit of liberalism did not transfer entirely to Yan's Chinese translations (as his altered titles suggest). In particular, the West had long situated the individual in society differently. Thus, it is said that Yan failed to accurately translate or convey Mill's conception of why free competition in the realms of ideas and social organization in particular was beneficial to society (Huang 2008). That all his translations took the form of the then-standard but soon-to-be-obsolete classical Chinese may have made the problem worse. Yan also faced the problem in all his translations of how to translate particular English terms that had no parallel in late nineteenth-century China, among them *the economy* and *economics*. He considered using the Chinese-character translations that had been adopted several decades prior in Japan, such as *jīngjì* or 經濟 for *the economy* and this combined with *xué* or 學 for *economics*. Indeed, these are the terms used in modern Chinese. But Yan thought that this translation mistakenly connoted the effective exercise of control over all national questions. He thus chose a translation arguably better for the time, *jìxué* or 計學. This term had a meaning that suggested calculation, "the relations among different economic actors," and "the management of finances at the household or firm level" (Osborne 2017, 298).

Nonetheless, through Yan liberal economics became part of the mix of ideas in China after 1895, a period that included the fall of the imperial system in 1911–1912. Chang Yü-Fa (2000) describes four main strands of Western socio-economic thought that received significant support in China during this time: liberalism, anarchism, socialist-inspired redesign of society, and women's rights. To this could be added the issue of ethnic-minority rights.<sup>6</sup> Before the 1911 installation of Sun Yat-sen as the president of China, all of these debates were set against the basic question of whether the best way forward was mere reform (*gǎigé*, 改革) or outright revolution (*gémìng*, 革命). Yan in particular believed that in placing the individual above society, and rights above obligations, in some respects Western liberalism was unsuited for the Chinese.

The debate played out in the 'new culture movement' of the 1910s and 1920s, which featured fierce debate over whether China needed total Westernization or preservation of Chinese tradition. The appeal to embrace democracy and science was particularly spearheaded by Chen Duxiu in his journal *The New Youth* (*Xīn Qīngnián*, 《新青年》), published from 1915–1922. During this time, intellectuals

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6. Women's rights and ethnic-minority rights are not necessarily inconsistent with liberalism, anarchism, or socialism, but this was a time when the internal dialogue was over what the single key was to Western power. Some people argued for classical liberalism, others for other ideas.

who had undergone a classical education, most famously Lu Xun, led a revolt against Chinese tradition, including Confucianism and classical written Chinese.

And so ideas did battle in China from roughly 1895 until the Japanese invasion of 1937. Throughout, there was little meaningful print censorship. Sun Yat-sen himself, while traveling extensively in North America and Europe before 1911 looking for support for his revolution, had been exposed to and was favorably impressed by various schools of socialist thought. As late as 1938, Guo Dali and Wang Yanan could successfully translate Karl Marx's *Capital*, despite several years of civil war and now once again war with Japan. Eugen Böhm-Bawerk's *Marx and the Close of his System* was also published in translation in 1936. And so debate was still vigorous, periodicals came and went, and the battle was done in that arena and in various books.

But meanwhile, politics was continuously chaotic. By the 1920s the liberal cause had been substantially damaged by territorial concessions from China to Japan in the Treaty of Versailles, even though the two nations had been victorious allies during the war. The CCP was founded in a meeting in Shanghai in 1921 which included Chen Duxiu, who had turned *New Youth* toward Marxism after Russia's October revolution, and Mao Zedong. After Sun Yat-sen had been installed as president, the child emperor Pu Yi abdicated in 1912, but then the generalissimo Yuan Shikai became president, and soon after that pronounced himself emperor before dying in 1916. China fell into warlordism in the 1920s, and 1927 saw both Chiang Kai-shek's campaign against warlords in the north and the adoption of armed struggle by the CCP.

Amidst the domestic chaos and the competition with other ideas, the constituency for political and economic liberalism was now considerably diminished. Even so, several liberal and Enlightenment texts were translated in the 1930s, including David Ricardo's *On the Principles of Political Economy and Taxation* (1931) and Immanuel Kant's *Critique of Pure Reason* (1931) and *Critique of Practical Reason* (1936). The two Marxist scholars Guo Dali and Wang Yanan translated *The Wealth of Nations* into modern (not classical) Chinese in 1931 as preparation for translating *Capital*.

So at the time of the Japanese invasion of the rest of China in 1937—Manchuria having been seized in 1931—liberalism was alive but in retreat in an environment of competing ideas. But there was still a thirst for *the* idea that would 'save' China. The CCP had now been in rebellion for roughly a decade. State management of the economy, as propounded in Sun Yat-sen's *Fundamentals of National Reconstruction* (Sun 1953/1924), if not outright state production, was the leading school of economic thought in China during the 1920s and 1930s, as it was in many countries in the West. But freedom of expression, largely intact through this period, would disappear after the victory of the CCP in China's Civil War.

## Liberal ideas in the communist era

### 1949–1978

From a platform on Tiananmen Square, Mao Zedong proclaimed the founding of the People's Republic of China on October 1, 1949. At that point, the Chinese government gradually moved to adopt the standard communist model of complete state media control, both broadcast and press. After a relatively open first few years, expression became a monologue and not a conversation. In addition, state propaganda, including the content of the daily papers, was used to organize themes for mass meetings. Mao did launch the "Hundred Flowers" campaign for freer expression in May 1956. But by 1957, street demonstrations and strikes were breaking out in several large Chinese cities. The criticism of the CCP was frequently vehement and occasionally violent, and in May 1957 Mao issued a communiqué to party leaders specifically urging that people be permitted to speak freely, but only with an eye to identifying CCP enemies and punishing them later. The sweeping of the identified dissidents into prison began weeks later and was completed within months (Dikötter 2013).

Obviously, in such an environment no alternative to prevailing communist orthodoxy, let alone liberalism, could play any role in the Chinese public conversation. Yet a number of landmark liberal texts were published by the state press. Why? To serve as educational 'internal reading material' (*nèibù dúwù*, 内部读物) for leadership elites. Mill's *On Liberty* (1959), Hayek's *The Road to Serfdom* (1962), Böhm-Bawerk's *Capital and Interest* (1959) and *Positive Theory of Capital* (1964), Jean-Baptiste Say's *A Treatise on Political Economy* (1963), and *The Wealth of Nations* (Smith 1972/1931, including a new orthodox Marxist introduction by Wang Yanan) were all published or republished during this time. In each case, the strictures of Marxist ideology meant that the works had to be fit into the corresponding 'scientific' history. This led to two possibilities: Either they were examples of corrupt bourgeois liberalism, sometimes called 'reactionary reference materials' (*fǎnmian cáiliào*, 反面材料, or *fǎndòng cái liào*, 反动材料) or of primitive political economy which eventually flowered into the mature work of Marx and his successors including Mao.<sup>7</sup> In either case these publications were not widely available to the general public.

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7. In his preface to the 1962 edition of *The Road to Serfdom*, Teng Weizao wrote: "Although he regards himself as an 'impartial author,' he is in fact a loyal servant in defending the capitalist system. Hayek has ingrained hatred against socialism and any kind of aggressive tendencies" (1962, 1, our translation).

## Liberal publishing, 1978–2017

In 1976 Mao died, and shortly thereafter the Gang of Four were arrested, with their trial concluding in 1980. In the interim Deng Xiaoping took and cemented power, and along with other new senior leadership he sought to reform the Chinese economy pragmatically—in whatever way would develop the country most thoroughly and rapidly. Soon after, censorship of the press and publication became less stringent. As a result, important works of liberalism could, and still can today, be (re-)translated and published in China. Indeed, with works out of copyright there are often multiple editions circulating at the same time. In addition, numerous publishers are issuing their own series of substantial Western works more generally, and classical liberal titles are often included. For example, the firm Commercial Press has been publishing a series of Chinese translations of classical academic works since 1981. Among the works in the series at least touching on classical-liberal values are Smith's *The Theory of Moral Sentiments* (1997), David Hume's *An Enquiry Concerning Human Understanding* (1981) and *An Enquiry Concerning the Principles of Morals* (2001), Ricardo's *On the Principles of Political Economy and Taxation* (1981), Mill's *Principles of Political Economy* (1991), Karl Popper's *The Open Society and its Enemies* (1999), and Hayek's *The Road to Serfdom* (1997), *The Constitution of Liberty* (1998) and *The Fatal Conceit* (2000). Across all editions, *The Road to Serfdom* has sold particularly well, and in intellectual circles has become somewhat influential. Public choice is represented as well with, for example, translated work of Geoffrey Brennan and James M. Buchanan (2004).

To be sure, in the realm of economic policy, the most influential Western economists have generally been of the neoclassical orientation. On the one hand, Milton Friedman was invited to China in the early 1980s to consult with Chinese officials on macroeconomic policy; on the other, the more dominant voices in those early years were figures like James Tobin and János Kornai, who advocated varying degrees of state intervention (Gewirtz 2017).

Yet outside government, some people with views easily described as classical liberal have had influence through their widely read public commentary. One is the Hong Kong native Steven N. S. Cheung, a top institutional and political economist. After a very successful academic career in the United States, he returned to Hong Kong in 1982 and participated in the crafting of early Chinese reforms (see Cheung 1986). For many years after that, he wrote regular columns in the *Hong Kong Economic Journal* and elsewhere, which have been highly influential with some segments of the Chinese public. In these columns, he made such liberal ideas as basic price theory clear to his readership through often-clever storytelling. Another influential market-oriented economist is Zhang Weiyang, who has shown special interest in 'Austrian' economics in recent years. He has written books on entrepreneurship

and how markets work. His book *The Logic of the Market* (Zhang 2010; 2015a) is designed to explain to a general readership some basic principles of the operation of markets. His recent textbook *Principles of Economics* (*Jīngjìxué Yuánnlǐ*, 《经济学原理》, 2015b) combines standard modern economic theory with Austrian views.

Yet while not as stifling as during the Mao years, the pressures of what we might call ‘political correctness with Chinese characteristics’ continue. When dealing with any politically sensitive topic, publishers or translators frequently include remarks indicating that the book is being translated foremost for the purpose of academic exchange. And sometimes liberal texts have content that directly criticizes socialism, which is major component of the ideology that supports the Communist Party’s monopoly on power. And so occasionally even content from the original work itself must be removed. A good example of such self-censorship is a Chinese translation of Ludwig von Mises’s *Socialism* (2008). The translators and publisher based on their own judgment chose to remove a number of criticisms of socialism in order to get it published, and the publisher still had to wait three years until the ideological climate was appropriate. But even in the face of the need to self-censor in this fashion, liberal thinking is unmistakably present. Notably, there was only one line removed from the 1997 translation of *The Road to Serfdom*, and it was the very first one: the legendary dedication “to the socialists of all parties.”

## **The room to advocate liberalism in today’s China**

### **Academia**

In Chinese universities today, the economic curriculum is a strange mix of classes on Marxism, which are required for all students, and classes that would look familiar to any Western college student, often using American textbooks and filled with models of aggregate supply and aggregate demand, indifference-curve equilibria, and so on. Thus, certainly by Chinese historical standards the modern economics presented there is little more interventionist than in the West. But Marxism is included on the entrance exams to begin both undergraduate and graduate study, and a Chinese college student must take a certain amount of Marxist economics, history and philosophy. As noted above, Marxist institutes also exist in many Chinese universities, and classical liberal political economy is often introduced there as obsolete thinking. Yet many economics professors at Chinese universities publish in the world’s leading economics journals. There is currently little coursework organized around either classical liberal authors or themes.

People have built scholarly networks to study and propagate liberal thought, but recently these networks have come under some pressure, as discussed below.

## Networks and associations

There is significant space in today's China for liberal groups, networks, and associations that may not have any official association with academia. The two best known have been the Cathay Institute for Public Affairs (CIPA) and the Chinese Hayek Society (CHS). The CIPA was founded in 2002, and its membership included many of the leading Chinese classical liberal scholars, including Liu Junning, Mao Shoulong, Yao Zhongqiu, Xia Yeliang, Wang Jianxun, Mo Zhihong, and Zhu Haijiu.<sup>8</sup> It was sufficiently effective to have won the 2011 Templeton Freedom Award for Excellence in Promoting Liberty. Several times a year it would hold conferences or other public events that presented research on liberal thought or analyzed public policy from a liberal perspective. It also provided a structure for Chinese scholars sympathetic to liberalism to engage in exchange with similar scholars from outside China. The CHS was a network of fluctuating membership consisting of both in-country and overseas contributors. Alas, recent trends in official ideology have become unfavorable to these groups, and both organizations have ended their work, though some members have decided their activities will continue in reorganized form. Such behavior, in which the structures through which ideas are promoted are shut down but the propagators of those ideas are usually free to re-organize and continue until they next cross the line—unless they cross too many lines, as has happened with, for example, the now-imprisoned 2010 Nobel Peace Prize winner Liu Xiaobo—are common in today's China.

Another similar organization is a forum for intellectual exchange run by the Unirule Institute of Economics (Tiānzé jīngjì yánjiūsuǒ, 北京天则经济研究所). It is a very influential non-governmental think tank, with top classical liberal economists such as Mao Yushi, Zhang Shuguang, and Sheng Hong, and the leading historian Wu Si among its members. It is well-known as a center of research on institutional economics and its application to China. It has received both funding from various Western foundations and domestic donations, and currently it depends mainly upon revenues generated internally. Recently its website was shut down by the government, but for now the English-language website is back online (its service provider is now located outside of China).

As we write, a still-existing example of an influential liberalism-inspired informal network is one organized by Wang Ying, someone with an extensive history both as an entrepreneur and a government official. In reading groups that

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8. One of the authors of this article (Feng) was a member of CIPA.

both meet in person and gather online, she encourages Chinese entrepreneurs to become both familiar and comfortable with the idea of continuous, undirected social change, and to see themselves as key agents in that process.

To the extent that such people are admired by the public and respected by government officials, their cultivation may be key to the success of enhancing the role of liberalism in the Chinese conversation. As a whole, these informal groups, like groups organized around many causes, fade and then grow as political pressures wax and wane. At the moment, they do not necessarily seek to engage in widespread public persuasion of the sort that might occur in an election campaign. Rather, they look to make a difference by exposing potential key players in China's possible futures to the ideas of classical liberalism.

### Political pressure

After 1978, as indeed throughout much of Chinese history, sympathy for liberal policies has risen and fallen in Chinese leadership circles. In the first decade, the enthusiasm of Deng Xiaoping for economic liberalism in particular undeniably grew in tandem with Chinese prosperity. China's leader Hu Yaobang had liberal economic sympathies, and perhaps liberal political sympathies by the standards of the early post-Mao era. In the latter half of the 1980s Zhao Ziyang was guardedly active in this role for political liberalism, but any official lionizing of this thinking ended with the brief, liberal-oriented 1989 protest movement, which was launched by Hu's death and whose violent termination also ended Zhao's career.

Today, some Chinese intellectuals sympathetic to classical liberalism also function as opinion leaders and seek to change current policy. And yet, such influence as they have is mainly indirect. Sometimes, as we have seen, their advocacy of freedom today or tomorrow and their exposure of illiberalism in the recent past draw the glare of the authorities. And, sometimes, they are as a result removed from specific positions of influence that are subject to the dictates of the authorities.<sup>9</sup>

The experience of Mao Yushi is illustrative. Mao is a trained engineer who graduated from Shanghai Jiaotong University in 1950. Since then he has been a breakthrough thinker and has been punished by the authorities for things he says and writes. In 1958 he was purged as a rightist while working for a state railway agency. He became a largely self-taught economist in the 1970s, and since then has advocated for liberal economic values. His best-selling introductory economics book *The Economics of Everyday Life* (*Shēnghuó zhōng de jīng jì xué*, 《生活中的经济

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9. The aforementioned Zhang Weiying was removed after twelve years as dean of the Guanghua School of Management, the business school at Beijing University, in 2010. His economic and political liberalism are generally thought to have played a major role in his removal.

学》; Mao 2004), which emphasizes the role of freely adjusting prices in moving resources to where they are more valued at the margin, the norms and culture of markets, and other liberal themes, continues to be a popular text. Along with Zhang Weiyang's *The Logic of the Market* (Zhang 2010; 2015a), which also incorporates many liberal and Hayekian insights on the role of knowledge and competition, it perhaps performs a similar role in China as Thomas Sowell's *Basic Economics* (2014) does for American readers. But Mao also attracted attention with a series of essays in which he criticized excessive state power and advocated for a more open society (e.g., Mao 2008). In 2010, he was prevented from traveling to Norway to see the imprisoned Liu Xiaobo receive his Nobel peace prize in absentia. The next year, Mao (2011) ignited the anger of China's small but inordinately influential community of Maoist devotees by releasing an essay called "Returning Mao Zedong to Human Form" ("Bǎ Mao Zedong huànyuán chéng rén," "把毛泽东还原成人"), in which he documented the human toll of Mao Zedong's (no relation) rule; the essay is no longer available in China. He won the Cato Institute's Milton Friedman Prize for Advancing Liberty in 2012, but his website was shut down in 2017, and both his influential Weibo account and Wechat public channel were closed recently. Other classical liberal figures have also recently had their Internet communication sites shut down, among them scholars such as Sheng Hong and Wu Si.

So the space for vigorous advocacy of classical liberal ideas may be shrinking, and this is troubling because the need for further liberalization is pressing. Coase and Wang (2012) emphasize, with good reason, the immense freeing-up of talent and drive in the post-Mao era. But substantial political control of resource use remains, and with China's growing prosperity the corruption flowing from this control has grown dramatically. Further, in some respects official CCP ideology has in recent years turned more collectivist, and more hostile to economic freedom and the instability that naturally comes with it. Classical-liberal ideas are as necessary now as at any time since the late 1970s. Where liberals can network and speak, especially speak so that others not so familiar with classical-liberal ideas can listen, it will be important for them to do so.

## Summary and prospects

Beginning in 1978 China began what at that time was the most dramatic reshaping of an almost totally planned economy to date. Since then its standard of living has grown dramatically. While at the outset confined to a few experimental zones, reform has taken hold to the extent that employment at large state-owned factories has shrunk dramatically as a share of the total, even as private enterprises

of all sizes have formed to fill the gap (Ma 2015). Liberal policies deserve much of the credit for this historic transformation.

This paper has offered an account of the history and current position of the classical-liberal values that promote economic and political competition in China. Built on some foundation of indigenous economic liberalism, the arrival of specifically Western liberal thinking was greeted enthusiastically in the late nineteenth century, although other imported ideologies were probably more appealing by 1930. But since reforms began in 1978, liberal texts, combined with recent Chinese interpretations of economic liberalism, have become widely available in China. There is plenty of raw material to generate discussions on the pragmatic and moral virtues of economic liberty. In the new China such discussions are not rare, whether online or offline. The Chinese have many eras of economic dynamism and minimal government economic intervention in their history, and the success of ethnic Chinese overseas is well known. The resources are thus there for the spread of liberal thinking in China.

But the story with regard to political liberalism is somewhat different. China is a one-party state, and while there is considerably more vitality in the marketplace for ideas than there was in the late 1970s, there are clear limits. The level of permissiveness rises and falls, but it is always difficult to publish translations or to own works with arguments about sensitive topics such as liberty or constitutionalism. CCP directives induce self-censorship by major commercial publishers and groupthink among academics, although such directives seldom explicitly restrict purely economic texts, whether meant for college classrooms or the general public, including ones oriented toward liberalism. And the censorship process is idiosyncratic. Some foreign books are allowed in, but content is deleted or modified directly by translators fearful of stricter censorship. Only a small number of books are banned outright, and often those directly implicate the CCP or its leaders (e.g., Yang 2012). Any writings that call into question the legitimacy of one-party rule or the conduct of officials present or past who have not fallen into disfavor are completely unacceptable.

That people might attribute, and political leaders might opportunistically ascribe, Chinese economic success to political illiberalism (as opposed to economic liberalism) is a worrying prospect for friends of China, including scholars, who might themselves be seduced by this myth or by the temptation to serve it (Holz 2007; Cowen 2017). Foreigners and Chinese alike ought to nourish the small but flourishing classical-liberal networks there.

Fortunately, survey research by Jennifer Pan and Yiqing Xu (2017) suggests that there is a constituency in China that believes simultaneously in economic liberalism, political liberalism, and even social libertarianism. Perhaps unsurprisingly, these views are more common among those who perceive themselves as

having done well under reform. While Pan and Xu do not estimate the size of this constituency, levels of individual economic success and economic development in the region where respondents live seem to be positively associated with the prevalence of these beliefs. Those who have benefited from economic liberalization thus may offer a ready base from which to build greater support for comprehensive liberalism. The link between liberal policies and enhancement of opportunities should be stressed. And so we conjecture that entrepreneurs, particularly those who can avoid excessive entanglement with government, must be in the vanguard of remaking China. For now, liberal ideas are alive and liberals are active. But even as public disagreement over some issues, especially the environment, has grown—with the grudging tolerance of the authorities—there has been a corresponding trend toward limits on anyone who takes too far any criticism that might threaten one-party rule, although it is not so often that such offenders are exiled, imprisoned, or murdered. Despite the strong hand classical liberals have to play, whether they will win in a game in which the deck is stacked remains to be seen.

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## About the Authors



Prof. Dr. **Xingyuan Feng** is Senior Research Fellow, Research Institute of Economic Thought and Economic History, Fudan University. He was a co-founder of Chinese Hayek Society, of Cathay Institute for Public Affairs, and of Forum for Austrian Economists in China, and he is co-editor of Modern Western Thought Series. He received his Ph.D. in economics from the University of Witten/Herdecke, Germany. Xingyuan's main research fields include the Austrian school of economics, institutional economics, new political economy, government finance, and banking and finance. He has authored or co-authored a dozen monographs including *The Political Economy of China's Great Transformation* (2016, Routledge) and *The Ecology of Chinese Private Enterprises* (2015, World Scientific). He is also the co-translator for a Chinese edition of Hayek's *The Road to Serfdom*. His email address is [fengxingyuan@gmail.com](mailto:fengxingyuan@gmail.com).



**Weisen Li** is a Professor in Economics at Fudan University, Shanghai. He was the Deputy-Dean of School of Economics at the University for many years, and currently he is the Director of the Research Institute of Economic Thought and Economic History at Fudan. He holds a B.A. in Economics from Shandong University, a Master's Degree from the Australian National University, and a Ph.D. in Economics from the University of Sydney. Professor Li has interests in the language of economics, ethics, anthropology, jurisprudence, and Austrian economics, particularly Hayek. He has published fifteen books and a range of articles in both Chinese and English. He also translated many English works of institutional economics, game theory, legal theory, and political sciences into Chinese. He is a columnist for the *Wall Street Journal* (Chinese), *Financial Times* (Chinese), and other leading media in China. His email address is [weisen\\_eco@hotmail.com](mailto:weisen_eco@hotmail.com).



**Evan Osborne** is professor of economics, Wright State University. A speaker of Mandarin, his interests include Chinese history from the late Qing to the present. He has done work on ethnic conflict and more generally on social conflict, and on the economics of art, empirical analysis of litigation, development economics, and various topics in sports economics. He is married and the father of two children. His email address is [evan.osborne@wright.edu](mailto:evan.osborne@wright.edu).

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# Liberalism in Iceland in the Nineteenth and Twentieth Centuries

Hannes H. Gissurarson<sup>1</sup>

[LINK TO ABSTRACT](#)

Iceland is a remote country with a tiny population, so a sophisticated Icelandic liberal tradition is hardly to be expected.<sup>2</sup> Nevertheless, Icelanders have developed two remarkable and original institutions facilitating individual choice and responsibility: the system of private enforcement of law during the Commonwealth period of 930–1262<sup>3</sup> and the system of individual transferable quotas in offshore fisheries since the late twentieth century. A few liberal intellectuals have also been active in public debate, first and foremost the leader of Iceland's struggle for independence, economic historian Jon Sigurdsson (1811–1883), but also the authors of the first three books in Icelandic on economics, pastor Arnljotur Olafsson (1823–1904), civil engineer Jon Thorlaksson (1877–1935), and economist Benjamin Eiriksson (1910–2000), and some more recent writers, including economics professors Olafur Bjornsson (1912–1999) and Ragnar Arnason (b. 1949), and the present author (b. 1953). Moreover, comprehensive liberal reforms were implemented in Iceland in 1991–2004, with remarkable success, even if the

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1. University of Iceland, 101 Reykjavik, Iceland. An earlier version of this paper formed a part of the author's 2016 report for the think tank New Direction in Brussels on "The Nordic Models."

2. In this paper, liberalism is used in the original political sense, as a political position in favour of individual choice and limited government, shared, despite many differences, by John Locke, Adam Smith, Alexis de Tocqueville, Lord Acton, Herbert Spencer, John Stuart Mill, Karl Popper, Friedrich Hayek, Milton Friedman, and Robert Nozick. In Icelandic, the word *friðsýðingja* is used about liberalism in this sense by people sympathetic to it, whereas those hostile to it prefer the term *nyfriðsýðingja* ('neoliberalism').

3. For economic and legal analyses of the Icelandic Commonwealth see Friedman 1979; Eggertsson 1992; Lindal 1993; Runolfsson 1993.

subsequent 2008 bank collapse came as a shock to the nation, though it quickly recovered.

The present piece only takes the story to about 1991. In a second piece to appear in a future issue of the present journal I will resume the narrative but in a somewhat different mode. Whereas the present paper is more strictly historiographical, the second piece will, while being historical in part, pick up in 1991 and enter the battlefield of ideas itself, as I critically analyse the widely circulated anti-liberal narrative about Iceland 1991–2017. The present piece begins around 1840, with the story of Jon Sigurdsson.

Before commencing, I should remind the reader of how small Iceland is. In a historiography of any country's trends, it is appropriate to focus on the most prominent individuals, and to suppose that, by their prominence, individuals and their decisions actually influenced the course of history. But in a tiny country like Iceland the influence of active and outspoken individuals is immediately palpable. Though Iceland has about the land area of Kentucky, her population is minuscule and highly concentrated in the capital region of Reykjavik. In 1840, the entire national population was just 57,000 people. In 1900 it was 78,000. In 2013 it was 323,000. The country today has a population approximately equal to that of the United States' 58th largest city, Corpus Christi, Texas, and much less than that of the least populated state, Wyoming.

## **The first Icelandic liberal: Jon Sigurdsson**

Iceland was settled over the period 874–930, mostly from Norway, and the Commonwealth was in place between 930 and 1262 when the Icelanders, trying to obtain security and avoid isolation, in a Covenant with the Norwegian king recognised his sovereignty (Karlsson 2000, 83–84). If, after 1262, the Icelanders thought however that they had obtained security by yielding their country to the Norwegian crown, then they would be greatly disappointed because they found themselves in a trap. As a result of innovations in shipbuilding technology, in the early 15th century English fishermen started to harvest fish in the Icelandic waters and to trade with the Icelanders. This should have opened several possibilities for Iceland of developing her fisheries and trading with foreigners. But now the Norwegian and Danish crowns had been united, and the Danish king was quick to prohibit all trade with foreigners, although it proved difficult to uphold his authority in the remote island. In 1467, English fishermen and traders even killed the crown's governor of Iceland. On three occasions in the sixteenth century the Danish king offered to sell Iceland to his English counterpart, Henry VIII, who was however not interested (Thorsteinsson 1957–61). I have calculated that the price

the king wanted for the country was approximately six million dollars in current prices (Gissurarson 2015b).

Slowly the Danish king re-established his authority in Iceland and imposed a total Danish monopoly of foreign trade. In alliance with the domestic landowning class, the Danish crown outlawed fishing and trade as full-time occupations: Every able-bodied person had to be a farmer, or the dependent of a farmer, or a farmhand, and registered with one of the roughly 5,000 farms in the country. As a consequence, the paradox arose that the Icelanders often went hungry even if surrounded by some of the world's most fertile fishing grounds (Eggertsson 1996). In mid-sixteenth century, the Danish king imposed the Reformation on Iceland and seized many church properties, and in 1662 he forced the Icelanders to accept the absolute power that he had already assumed in Denmark. Those were dark centuries for the Icelanders. The country was ravaged by cold spells, volcanic eruptions, earthquakes, epidemics, famines, and economic isolation, with the population declining to around 35,000 in 1785 and the Danish government seriously considering evacuating it to another Danish territory (Agnarsdottir 1992, 87).

The severe economic crisis in late eighteenth century marked however the downfall of the old landowning class and consequently the passing of its stranglehold over the economy (Gunnarsson 1980). Under the influence of liberal ideas, the Danish government abolished the monopoly trade in 1787, and farms belonging to the church and the crown were sold, creating a new class of independent farmers, alongside a few intellectuals, officials, merchants, and even full-time fishermen. It was into this emerging new society that in 1811 Iceland's first liberal leader, Jon Sigurdsson, was born. A pastor's son from the Western Fjords, in 1833 he went to Denmark to study philology at the University of Copenhagen. He soon became an unrivalled expert on Icelandic history and literature, and he worked for most of his life at an institute established by the Danish authorities to keep old Icelandic manuscripts. Well-read in economics and politics, Sigurdsson was influenced by the liberalism of John Locke, Adam Smith, and John Stuart Mill (Olason 1929, 364–370). In 1841 Sigurdsson started a magazine, *New Social Review* (*Ný félagsrit*), where he expressed his political views: He was a firm believer in progress, economic liberty and national self-determination. "Individual liberty should not be limited unless where society as a whole (the nation) would be harmed by it," he wrote (1841, 73).

Jon Sigurdsson was untiring in preaching that Icelanders should and could learn from other nations without having to sacrifice their pride and identity. "We have advanced the most when we have travelled widely and traded with other countries, but with many countries, not only with just one," he observed (1842, 146–147). He was a strong advocate of free trade, and he argued for it in the spirit of Adam Smith:

Our trade is confined to just one country, and we are not allowed to do business with any other countries. This goes against the nature of exchange and evolution, because progress and prosperity depend on trading what is necessary, so that people in fact support one another. When a nation disregards this rule and this law of nature, it will be punished, and the punishment will be its own humiliation and loss. No country in the world is completely self-sufficient, even if human foolishness has tried to make it so. Neither is any country such that it cannot contribute something and thus obtain what it needs. But when a country has obtained what it needs, which is what trade brings about, then it is as if itself had possessed these necessities. When trade is free, then every nation offers what it has in surplus, to those who have what it needs (Sigurdsson 1843, 52–53).

Sigurdsson pointed to England as the example the Icelanders should follow. Its rapid progress could, he wrote, without doubt be attributed to its great freedom of enterprise and association (1844, 10).

Sigurdsson's most influential paper, "An Exhortation to the Icelanders," was published in 1848, when the Danish king, under pressure to renounce his absolute power, was preparing a constitution for the Danish Realm which included not only Denmark, Iceland, Greenland, and the Faroe Islands, but also the two duchies of Schleswig and Holstein. The king was keen on retaining his duchies, but Holstein was to all purposes a German territory, whereas Schleswig was mixed. Therefore many Danes wanted to abandon Holstein and annex Schleswig to Denmark, while both the leaders of Holstein and of the German states were adamantly opposed to that idea. In his



Sigurdsson

"Exhortation" Sigurdsson argued that the 1262 Covenant had been made between the Icelanders and the Norwegian king, not the Norwegian nation. Later, the Danish king had replaced the Norwegian king, so the Covenant was between the Icelanders and him. In 1662, the Covenant had been annulled when the Icelanders had recognised the absolute power of the Danish king. This was also a treaty just between them and the monarch. With the Danish king now renouncing his absolute power in Denmark and appointing a representative government in that country, this meant for the Icelanders that the 1262 Covenant between them and the monarch became valid again. The government of Denmark therefore had no right to govern Iceland.

The logical next step, Sigurdsson argued, was to establish a legislative parliament in Reykjavik and to appoint a government with a representative in Copen-

hagen. It should be emphasised, however, that Sigurdsson did not solely base the claim to national self-determination on an old document, the 1262 Covenant. His two other arguments, perhaps more convincing to foreigners, were from identity and prudence. He pointed out that Icelanders were a separate nation with their own history, literature and language. Moreover, it was prudent to assume that they knew better than Danish officials far away what was necessary for the country: Self-rule was, Sigurdsson submitted, a prerequisite for the progress which Iceland desperately needed (Sigurdsson 1848).

In 1848, Sigurdsson became the recognised leader of the Icelandic independence movement. Most Icelanders accepted his three arguments for national self-determination, from legality, identity, and prudence, even if the motive of some of his supporters, especially conservative farmers, may paradoxically have been resentment at the attempts by enlightened Danish authorities to liberalise Icelandic society, with measures such as the stipulation of freedom of the press and of religion and the abolition of labour bondage (*vistarband*), the old requirement that everybody should be registered and employed at a farm (Halfdanarson 2012). From 1845, Sigurdsson was a member of a consultative parliament which had been established by royal decree two years earlier and which convened every other year in Reykjavik. In 1849 he was elected Speaker of the Parliament. In the summer of 1851, the Danish government summoned a National Assembly in Reykjavik to decide on Iceland's future political arrangements. The Danish Governor introduced a bill on the status of Iceland within the Danish Realm, stating essentially that Iceland should be governed as a Danish province with some self-rule. While the Assembly was deliberating, a Danish warship with a troop of twenty-five soldiers was kept in the harbour. The Assembly decided to reject the government bill and presented another bill which amounted to a constitution for an independent Iceland, in a personal union with Denmark, with provisions for some cooperation with the Danish government. The Governor rejected the Icelandic proposal and dissolved the Assembly. Sigurdsson stood up and protested, and then almost all the members of the Assembly rose and said as if with one voice: "We all protest!" (Karlsson 2000, 212–213). Thus, the attempt failed to find an arrangement for conducting Icelandic affairs which would be agreeable both to the Danish government and the Icelanders.

Most of Denmark's leaders were by now well-disposed towards Iceland, which they not only recognised as a country with a distinct identity, but which they also respected as a guardian of the ancient Nordic cultural heritage. They wanted to maintain control of Iceland, however, for three reasons. First, the question of Schleswig and Holstein was still unresolved. If Iceland was allowed to leave the Danish Realm, then the two duchies might do the same. Secondly, it may have been a matter of prestige to some Danes to include Iceland in the Realm, because at that

time it certainly was not a matter of profit: In the 1850s, the Danish Treasury paid about double the amount of money to Iceland that it derived in revenue from the country. Thirdly, many Danes were afraid that Iceland—a poor, stagnant, remote country with a tiny population—could hardly survive on her own. One of them was Carl Emil Bardenfleth, who had been Governor of Iceland for a few years before he became Danish Minister of Justice. The “young generation’s fantasies about the golden fruits of Icelandic autonomy would show themselves to be nothing but illusions,” Bardenfleth wrote in his autobiography. He was convinced that self-government would only lead to “long-lasting stagnation in Iceland’s progress towards culture and civilization” (quoted in Halfdanarson 2012, 260). Iceland needed Denmark, he thought.

Sigurdsson may have agreed, up to a point. He was a practical man, realizing that Iceland needed economic progress to be sustainable as an independent country, and economic progress required foreign capital which could probably only come from Denmark. But Sigurdsson thought that Icelanders also needed self-respect and dignity, especially because they were so few and poor. Therefore he put forward the argument from the 1262 Covenant, for even though many would think the argument absurd, it enabled the Icelanders to approach the matter as not asking for a favour but as insisting on a right. Sigurdsson adopted the same approach when he in the early 1860s was a member of a committee appointed by the Danish government to prepare the fiscal separation of Iceland and Denmark. The committee members were unanimous in proposing that the finances should be separated and that the Danish Treasury should transfer a sizeable sum annually to the Icelandic Treasury. The transfer was partly regarded as compensation for the landed properties of the Icelandic church; initially, revenues from them had been used to finance schools in Iceland, and when the properties had been sold the money had been paid into the Danish Treasury. All the committee members except Sigurdsson agreed that this sum should be about 42,000 rigsdaler (or ‘realm dollars’), the Danish currency at the time. Sigurdsson however tried to calculate what the Danes really owed the Icelanders, not only for the landed properties they had acquired and then sold, but also for Iceland’s share in the profit of the monopoly trade. He concluded that Iceland had a reasonable claim on Denmark for an annual transfer of about 120,000 rigsdaler, from which he subtracted 20,000 rigsdaler as Iceland’s contribution to the Royal House and central government: Thus, he proposed an annual transfer from Denmark to Iceland of 100,000 rigsdaler (Karlsson 2000, 219). Needless to say, Danish leaders remained unconvinced by Sigurdsson’s calculations. His chief purpose may also have been to define the contribution from the Danish treasury in a manner consistent with the self-respect of the Icelandic nation: not as poverty relief, but as rightful compensation for past wrongs.

Tall, handsome, with snow-white hair from middle age, friendly, but uncompromising, for thirty years Sigurdsson was not only the leader of Iceland's struggle for independence, but also the central figure in the Icelandic community in Copenhagen. He and his wife entertained regularly, and their house was always open to Icelanders passing by. In addition, Sigurdsson was a tireless informal facilitator in Denmark, assisting the mighty and the humble back home in various tasks that had to be undertaken on their behalf in the distant capital. He kept his strong belief that Iceland needed above all economic freedom, writing in 1866 to his brother:

You think that someone will absorb us. Let them all absorb us in the sense that they trade with us and do business with us. Freedom is not about living alone and not having anything to do with others. I doubt that Simeon Stylites or Diogenes were freer than any other unfettered people. True enough, freedom comes mostly from within, but no freedom relevant in society is realized except in exchanges, and they are therefore necessary for freedom. (Sigurdsson 1866)

Sigurdsson was however no radical. In Reykjavik in 1875, young students organised a celebration for him, one of them, Gestur Palsson, composing a poem on the occasion. When Sigurdsson thanked them, he took issue with a statement in the poem that he was “the leader who never knew any restraints.” He rejected the notion that he had never known any restraints. Discipline and restraints were needed for human development, he observed. Restraints were necessary both within and outside, both for individuals and for nations. Unrestrained freedom, without any limits, was no freedom, but simply turmoil and disarray (Jakobsson 1933, xxi). Thus, Sigurdsson may be characterised as a practical liberal. After he passed away, Thorlakur O. Johnson, a Reykjavik shopkeeper, led a movement to make his birthday, 17 June, a day of celebration. The first such celebration was held in 1886, becoming a tradition in early twentieth century. The Icelandic republic was established 17 June 1944, and since then Sigurdsson's birthday has been the national holiday.

## **In the spirit of Bastiat, Mill, and Cassel**

Even those few Icelandic intellectuals who disagreed with Sigurdsson's historical and legal arguments tended to share his liberal views. One of them was Arnljotur Olafsson, who in 1880 published the first book on economics in Icelandic, *An Inquiry into Wealth*. Olafsson had gone to Copenhagen in 1851 and studied economics for a few years at the University. Lacking the means to complete

his studies, he had taken on various odd jobs, including that of being private tutor in the household of a Danish baron, Blixen-Finecke. Olafsson accompanied the baron and his son on tours to Southern Europe. He eventually returned to Iceland, married, and completed in 1863 a degree in theology, which was then the most practical line of study. Subsequently, he became a pastor in Northern Iceland and was also elected several times to the Icelandic Parliament, but there he was too independent, and perhaps also too obstinate, to become influential. In his first years in Parliament, he argued for the establishment of an Icelandic bank and against the labour bondage. Olafsson became a prosperous farmer as well as a respected pastor, and he maintained a lively interest in economics and statistics, publishing several learned papers on Iceland's economic history. His well-stocked library included books by Herbert Spencer and John Stuart Mill.

Olafsson's book *An Inquiry into Wealth* was a vigorous defence of economic freedom, mainly based on Frédéric Bastiat's *Economic Harmonies*.<sup>4</sup> Everybody had an interest in competition because it induced producers to serve their fellow beings: "Competition is initially guided by self-interest, because competition is liberal, it is liberty itself; but it reins itself in, by reins which are in fact non-coercive, and thus it leads self-interest against its will to work for the general good." Olafsson observed that the free market set prices much more efficiently than any institution: "Competition is the invisible setter of prices in every free economy. It prices human goods,



Olafsson

and it does it more effectively than the old Icelandic chieftains priced the goods of Norwegian merchants, or the later royal sheriffs priced the goods of the Hansa merchants and the English sailors" (Olafsson 1880, 81, 79). By no means a mere translation or summary of *Economic Harmonies*, Olafsson's book was well-written and abounding with Icelandic allusions and examples. The author also translated an extract of Bastiat's *Laws*, published in two parts in an Icelandic magazine in 1890. As Olafsson grew older however, he became more conservative, opposing like some other affluent farmers the complete abolition of labour bondage against which he had campaigned as a young man (Olsen 1906).

It should also be noted that in 1886 an Icelandic journalist and adventurer, Jon Olafsson, translated Mill's *On Liberty*. At about the same time an Icelandic student in Copenhagen, Sigurdur Jonasson, translated Mill's *Subjection of Women*.

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4. An extract of one of Bastiat's most famous papers, "What Is Seen and What Is Not Seen," was also published in Icelandic (1880).

Even though that translation was only published in 1900, it had a strong impact on the Icelandic movement for the equal rights of women.

In the second half of the nineteenth century, the backward, poor Icelandic society underwent a transformation. A vibrant spirit of enterprise came to the island. In 1855, foreign trade became totally free, having previously been confined to Danish subjects, even after the abolition of the monopoly. In 1886, the first Icelandic bank, Landsbanki, was established by the government. It put into circulation Icelandic kronur, interchangeable with the also circulating Danish kroner. In 1904, a private bank, Islandsbanki, was established by Danish and Norwegian investors, being given the right to issue kronur and explicitly backed by gold. The two banks provided the capital necessary to replace the old open row boats with modern fishing vessels, first decked sailships and then trawlers. The fisheries replaced agriculture as the most important sector of the economy, owners and captains of fishing vessels prospered, and—to the chagrin of many farmers—poor people from the countryside flocked to the fishing towns on the coastline, mainly to Reykjavik.

The Danish government granted Iceland home rule in 1904, the governor being replaced by an Icelandic minister who, while a member of the Danish Council of State, was only answerable to the Icelandic parliament. But Icelandic enterprise had its opponents, not least in intellectuals who identified a potential political constituency in the rapidly expanding class of urban labourers as well as in farmers, who resented seeing their former farmhands leave for the towns and were unhappy that the banks were mainly providing capital to fishing firms. Since Iceland had gained home rule and was approaching full sovereignty, the old parties of the struggle for independence gradually became obsolete. Political ideas or collective identities guided the formation of new parties within Iceland's multiparty system, which was based on proportionality. In 1916 was founded the Social Democratic party (Althyduflokkurinn), which tried to gain the support of urban labourers and cooperated closely with the Icelandic Confederation of Labour and with its Danish sister party. The same year some farmers in parliament established the Progressive Party (Framsoknarflokkurinn) which was backed by the Cooperative Movement and had much support in rural districts.

After peaceful and friendly negotiations, Iceland in 1918 became a sovereign state in a personal union with Denmark, which undertook to represent Iceland internationally and to protect her fisheries limit in cooperation with the Icelandic Coast Guard (Halfdanarson 2000). Jon Sigurdsson's political programme had finally been implemented, seventy years after he had published his "Exhortation to the Icelanders." But his political heirs were split into several factions, challenged by the Social Democrats on the one hand and class-conscious farmers on the other hand.

It fell to Jon Thorlaksson, a civil engineer and successful businessman, to try and organise a conservative-liberal or centre-right party in the spirit of Sigurdsson. A farmer's son from the North of Iceland, Thorlaksson was a brilliant student who completed grammar school with the highest marks ever given. In 1903, he graduated as a civil engineer from the Technical University in Copenhagen (then Polyteknisk Læreanstalt, later Danmarks Tekniske Universitet) and two years later he became Iceland's Chief Government Engineer, in the following years building many roads and bridges around the country (Gissurarson 1992). He later said that as a young man, his strongest desire was to use technology to bring his poor and backward country into the modern age (Thorlaksson 1923, 9).<sup>5</sup> A longtime member of Reykjavik City Council, he strongly supported the 1906 construction of the city aqueduct and the 1913 construction of the Reykjavik harbour, both crucial for modernisation in the capital. He left his government position in 1917, devoting himself after that to independent engineering projects and to his business firm which imported various kinds of building materials. Thorlaksson was also one of the pioneers in harnessing Iceland's many waterfalls, rivers and geysers to produce hydroelectric power. In 1921, on commission, he built the first power plant serving Reykjavik. In 1926 he presented a well-developed plan of using warm springs to heat up the houses of Reykjavik (Thorlaksson 1926a); this plan was gradually implemented in the 1930s and 1940s. While left-wing intellectuals sat in Reykjavik coffeehouses eloquently lamenting the inadequate living conditions of the Icelandic working class—sometimes in moving poems—Thorlaksson sat in his office designing projects that would greatly improve the living conditions of all Icelanders, including common workers, providing them with heat, light, and water, and roads, ports, and bridges.

When elected to parliament in 1921, Thorlaksson immediately started to try and bring the remainder of the old parties of the independence struggle together into a centre-right party. In early 1924, under his leadership, most members of parliament for the old parties founded the Conservative Party (Ihaldsflokkurinn) which became the largest group in parliament, almost commanding a workable majority. Thorlaksson explained that the name was chosen because the new party wanted to defend the values of economic freedom, private property rights, and fiscal and monetary stability, which had been firmly in place before the Great War and which now were



Thorlaksson

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5. All the works by Thorlaksson quoted are reprinted in his collected speeches and papers (1985).

being threatened by the emerging left. He wrote: “Our ideal is that society should consist of as many independent and free individuals as possible, and that each and every one of them should have as many opportunities as possible to increase the welfare of their families and thus the welfare of society, without harming anyone” (1926b, 18). Thorlaksson distinguished between four political dispositions. One was the liberal one, “the absence of an urge to control other people” (ibid., 5). Another disposition was conservative: it was to be cautious and want to maintain useful traditions. A third disposition was authoritarian, an urge to control other people. A fourth disposition was radical, the desire to break down the established order and to build something new on its ruins. Thorlaksson said that these four dispositions could exist in various combinations. In backward countries, liberals had for example to be radical. But in the 1920s Iceland, liberal and conservative people had a common cause: the defence of the liberty gained in the 19th Century. Their chief adversaries were the socialists who combined authoritarian and radical dispositions.

Thorlaksson’s party was not modelled on the Danish Conservative People’s Party, which derived its support mostly from the old establishment of landowners, high government officials, industrialists, and businessmen, but rather on the free-trade wing of the British Conservative Party. Like Sigurdsson, he admired the Anglo-Saxon political tradition. In a 1927 speech in parliament, Thorlaksson said: “Experience here in Europe shows that those countries have fared the best where the written statutes are the fewest, and where the constitutional customs are the firmest. Here I am referring to Great Britain.”

While Thorlaksson was universally respected for his intelligence, unflinching honesty and capacity for hard work, he lacked charisma, and in early 1924 another member of his party, more amenable to the centre, formed a Conservative government. Thorlaksson became Finance Minister, and in the autumn of 1924 he authored what was only the second book on economics published in Icelandic, *Currency Depreciation (Laggingid)*, where he tried to explain why the Icelandic krona had sunk in value in the preceding years and what should be done about it. Thorlaksson’s analysis of monetary affairs closely followed that of Swedish economist Gustav Cassel, then one of the best-known economists in the world. Thorlaksson’s answer to the first question was that the krona had sunk in value because too much of it had been produced during and after the Great War. Thorlaksson did not give a direct answer to his second question, but he proceeded as though monetary stability could only be reintroduced by returning to the gold standard and becoming a full participant in the Scandinavian Monetary Union, as Iceland had indirectly been when she was under Danish rule. The choice, as he presented it, was between returning to the gold standard at the pre-war rate or at the present rate. It

was clear that he personally favoured a return to the gold standard at the pre-war rate, like Churchill in the United Kingdom.

In 1924–1925, there was a boom in Iceland and the krona was allowed to appreciate, from around 47 per cent of its pre-war value in gold, to around 82 per cent. But Thorlaksson did not have sufficient support to carry his monetary stabilisation any further, and in the 1927 parliamentary elections his party was defeated. A minority government was formed by the Progressive Party with the support of the Social Democrats. Feeling that traditional liberties were under threat, in 1929, the last remaining members of parliament for the old parties of the independence struggle joined Thorlaksson's Conservative Party, which subsequently changed its name to the Independence Party. Thorlaksson was elected its first leader.

During the five years of his leadership, Thorlaksson set out the position of the Independence Party in almost purely liberal terms. His opponents conceived of unfettered competition in the free market as a battle in which the weakest lost. It was, they said, a race in which the devil took the hindmost, a modern Colosseum. Thorlaksson considered this to be a grave misconception. In schools, he argued, competition was between students for grades; it was about them developing their individual talents, not about harming others. Likewise, in sports, competition was between athletes for prizes; it was about them training to perform to the best of their individual abilities, and again not about harming others. Similarly, in the marketplace competition was between providers of goods or services for profit; it was about satisfying the needs of customers in the best way, either by quality or price, and not about harming others. The case for competition, Thorlaksson submitted, echoing Adam Smith and other classical liberals, was that it led people who were only working for their own interest to seek to serve the needs of their fellow beings. In a paper read to the last general meeting of the Conservative Party (and the first meeting of the Independence Party) in 1929, Thorlaksson said:

The purpose of economic activity, to satisfy human wants, cannot be better served than by allowing the human instinct for self-preservation to lead everyone to serve others to their best ability. In the self-regulating machinery of free trade, the pursuit of self-interest is the power engine which drives everything forward, while the great accomplishment of the machine is the production to satisfy everybody's wants. (Thorlaksson 1929, 25–26)

Thorlaksson's ideas on the competitive economic order were directly derived, as was his monetary analysis, from Cassel, who in Sweden was very active in popularising economic liberalism. In 1928, Cassel had published a series of articles under the name *Socialism or Progress*, and one of them, "Capital and Progress" was obviously the inspiration for Thorlaksson's exposition. Some of Cassel's newspaper

articles were indeed translated into Icelandic and published in the magazine of the Young Independents (Cassel 1930a–d; 1932).

Thorlaksson firmly rejected the idea that political parties should be based on classes. Instead, different ideas about the common good and how to attain it should divide them.<sup>6</sup> However, in the Great Depression of the early 1930s, classical liberal ideas lost their credibility with many. While people continued to respect Thorlaksson, his Independence Party did not do as well as hoped in two out of three elections fought under his leadership. Even if the Independence Party received most of the votes, the Progressive Party commanded the largest parliamentary group, as the rural districts where it had its main support were vastly over-represented in parliament.

## Iceland's road to serfdom: economic controls

In the early 1930s strict economic controls were imposed in Iceland, which enabled government commissions to shunt a lot of business from private merchants, usually supporters of the opposition Independence Party, to the cooperative movement, closely aligned with the ruling Progressive Party (Asgeirsson 1988). Islandsbanki collapsed and was nationalised under a new name, Utvegsbanki. The Progressive Party government established a third bank, Bunadarbanki, whose main task was to provide capital to agriculture. Moreover, in the 1930s a strong communist movement emerged, enjoying political and financial support from Moscow. Protesting against wage cuts, the communists showed their strength in a fierce street riot in Reykjavik on 9 November 1932 when they managed to overpower the tiny Reykjavik police force and bring about the withdrawal of the cuts (Gissurarson 2011). From that point on, wages in Iceland were regarded as 'sticky' or 'rigid': If wage cuts became necessary, then they were achieved indirectly, either through controls or inflation. The idea of providing monetary stability by returning to the gold standard became moot. In bad health, Thorlaksson resigned in 1934 as Independence Party leader. A year earlier, he had however been elected as Mayor of Reykjavik, an Independence Party stronghold. During his short tenure as Mayor, before his premature death, he was very active, encouraging the opera-

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6. Thorlaksson shared many traits with Thomas Madsen-Mygdal, the robust leader of the Danish liberal party Venstre and Prime Minister of Denmark in 1926–1929. The differences between them were less in their views than in their situation. In Iceland, there was no conservative party competing with the liberal one, and Thorlaksson was not as narrowly focused on any one sector of the economy as Madsen-Mygdal was on agriculture. Thorlaksson's Independence Party was to some extent what a merger in Denmark between the Conservative People's Party and Venstre would possibly have looked like, or one in Sweden between the Folkpartiet and the Moderate Unity Party.

tions of small privately owned boats from Reykjavik and starting to build for the city both a big hydroelectric power plant and a geothermal system for heating up houses.

The third book in Icelandic on economics dealt with the economic controls imposed in the 1930s. Its author was Benjamin Eiriksson, who well illustrated Leon Trotsky's remark that anyone wishing to live a quiet life did badly to be born in the twentieth century. The son of a poor fisherman in a village near Reykjavik, Eiriksson soon showed himself to be an excellent student, and his brother, a taxi driver, financed his education. Graduating in 1932 from Reykjavik Grammar School, Eiriksson started reading economics at Humboldt University in Berlin (then called the Friedrich-Wilhelms-Universitaet). Eiriksson as a student was a committed communist, and when he went to meetings of left-wing students it was not uncommon that Nazi gangs tried to break them up, even by shooting at them. When the Nazis took power at the end of January 1933 Eiriksson decided to move to Stockholm, where one of his teachers was the radical social democrat Gunnar Myrdal.

Still a communist, Eiriksson decided in 1935 to accept an offer to train at one of the clandestine schools which the Comintern operated in Moscow, the so-called Western University (KUNMZ), where his code name was Erik Torin. In Moscow, Eiriksson fell in love with a German girl, Vera Hertzsch, who had moved to the Soviet Union, married and separated, and was working as a journalist and a part-time student. But now Stalin's purges were beginning, and Hertzsch's nominal husband was denounced as a Trotskyite. When the Western University was closed in 1936, Eiriksson could not stay much longer in Moscow. He decided to return to Stockholm where he received a degree (fil kand, roughly comparable to an M.A.) in economics and Slavic languages. When Eiriksson left, Hertzsch had become pregnant, and she bore their child in March 1937. A year later, in March 1938, Hertzsch was however arrested as the wife of a Trotskyite, in the presence of an Icelandic writer, Halldor Kiljan Laxness, a Stalinist who was travelling in the Soviet Union. She was sent to a prison camp where her child apparently soon perished, and she herself died of malnutrition after five years. Laxness told Eiriksson about the arrest, but kept otherwise quiet about it for 25 years, continuing staunchly to defend Stalinism (Gissurarson 2004).

In the summer of 1938, Eiriksson returned to Iceland as an economist and, not immediately finding a job, he wrote his book *Causes of the Economic Problems and Currency Shortage*. He pointed out a contradiction in the policies of the Icelandic government: At the same time as it wanted to reduce imports in order to save foreign currency, it was stimulating demand for imports by offering loose credit through the three government banks. Moreover, whereas the strict import and currency controls were ineffective, they were harmful to the economy, distorting

it and stifling entrepreneurship. The overvalued krona was a great burden to the export sectors, especially the fisheries. The only feasible way out, Eiriksson argued, was to devalue the currency, to abolish the strict import and currency controls, and to reintroduce free trade with other countries.

The economic analysis in Eiriksson's book was plausible, but nevertheless he did not get much of a reception. His comrades in the Communist Party and the social democrats were adamantly against currency devaluation, because it would reduce labour's purchasing power, while the leaders of the Independence Party and the Progressive Party were wary of the young communist recently arrived from Moscow. However, in early 1939 the krona was devalued, even if extensive economic controls remained; Eiriksson's analysis had not brought this about, but it may be argued that it correctly predicted it. In that year, Eiriksson however left the Socialist Party, which had been formed in 1938 as a merger of the Communist Party and a radical faction of the Social Democrats. He could not accept the Party's slavish devotion to Stalinism. In 1942 Eiriksson left Iceland, going to the United States to pursue graduate studies in economics (Gissurarson 1996).

In the spring of 1938, Benjamin Eiriksson was not the only Icelander to graduate in economics from abroad. In Copenhagen, Olafur Bjornsson finished his studies after six years at the University. A pastor's son from the North of Iceland, as a young man Bjornsson had briefly flirted with socialism, in the midst of the Great Depression, but his views changed when during his last winter in Copenhagen he came across two books, *Socialism* by the Austrian economist Ludwig von Mises and *Collectivist Economic Planning*, a collection of papers edited by another Austrian economist, Friedrich A. Hayek. In his book, originally published in German in 1922, Mises argued that collectivist economic planning such as socialists traditionally envisaged was bound to fail because the planners could not price resources and other goods according to their relative scarcity. They could not make rational decisions about whether to build a road or a railway between two places, or whether to use a plot of land to grow corn or wine, or about thousands of other matters. In a free-market economy, such decisions were however made spontaneously by individual agents on the basis of prices and rational calculations. "And then we have a socialist community which must cross the whole ocean of possible and imaginable economic permutations without the compass of economic calculation," Mises wrote (1936, 122). Hayek added several important considerations to Mises's critique of socialism, arguing that decentralisation of knowledge required decentralisation of decisions. He also observed that owners and entrepreneurs performed a necessary role in a dynamic economy: Their acquisition and transmission of knowledge through trial and error could never be simulated by government experts and bureaucrats (Hayek 1935).

Bjornsson was probably also influenced by some of his teachers at the University of Copenhagen. One of them, Laurits Birck, rather conservative and elitist, offered many economic insights and had some impact in Denmark, not least because of his biting wit and ability to appeal to a wide audience. Bjornsson often recalled Birck's remark that under the gold standard a central bank only needed a parrot as governor for it to function properly. Axel Nielsen was an able, but non-ideological monetary economist. Jens Warming, who taught statistics to Bjornsson, was at that time a somewhat underestimated economist. It was only later that his peers fully realized that he had written original studies in the economics of non-exclusive resources. He had as early as 1911 analysed overfishing as the necessary consequence of unlimited access to a limited resource such as a fishing ground.<sup>7</sup> His work anticipated some important points made by Arthur C. Pigou in his welfare economics, and his analysis of overfishing was almost identical to that of the two English-speaking economists who are usually regarded as the pioneers of fisheries economics, H. Scott Gordon (1954) and Anthony Scott (1955). Bjornsson's supervisor at Copenhagen University was an economic liberal, Professor Carl Iversen. However, Iversen hardly ever publicly expressed his liberal views, and he became, somewhat like the liberal economist Lionel Robbins in the United Kingdom, an establishment figure, serving for many years as rector of the University of Copenhagen (Kurrild-Klitgaard 2015, 402).

Back in Iceland, Bjornsson first worked at the Statistical Bureau, and then in early 1939 he started teaching at the newly-established High School of Commerce which was a year later merged with the University of Iceland. Bjornsson was appointed Associate Professor (*dosent*) at the University in 1942. He published textbooks on his teaching subjects and wrote many articles where he restated Mises's and Hayek's argument that socialism was not economically feasible and that it would lead to tyranny. In 1944 he joined the Independence Party, and in 1945, on the initiative of young Independence Party members, he translated into Icelandic an extract of Hayek's *Road to Serfdom* that had been published in *Reader's Digest*. The translation was serialised in the leading Icelandic newspaper *Morgunblaðid*. It provoked angry reactions from both the social democratic newspaper *Althyðubladid* and the socialist newspaper *Thjodviljinn*, the latter one complaining about the "international freak" Hayek and the "national freak" Bjornsson (quoted in Gissurarson 2011, 208).

A young and clever socialist who had just graduated in economics and politics from Stockholm University, Jonas H. Haralz, responded in *Thjodviljinn* that Hayek was making unrealistic assumptions about competition and the free market, as technology required bigger units of production. Hayek was also attacking a

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7. Warming returned to the subject in 1931. See also Kærgård et al. (1998).

strawman, Haralz said; Western socialists had no intention of introducing central economic planning; they just wanted to nationalise a few key industries in order to ensure rational investment. Haralz added that the Independence Party should listen to more relevant prophets than Hayek, for example William Beveridge or John Maynard Keynes. Bjornsson replied that Hayek's book should not be interpreted as a scientific prediction, but rather as a warning against the possible consequences of power concentration. Moreover, it was by no means obvious that new technology was making competition obsolete. For example, the common concern about transport monopoly in the age of railways had disappeared with the private car. Bjornsson pointed out that often monopolies were created or maintained by governments. He added that the Independence Party did not need a prophet, but that it was sensible to try and learn from eminent scholars.

In a rejoinder, Haralz wrote that government officials, backed by democratic assemblies, could, with the assistance of experts, make and administer comprehensive national plans. Bjornsson replied yet again, recalling the danger which the concentration of economic and political power in the hands of a few posed for individual freedom. "Even if all members of a society had a formal right to employment, it would be easy to implement it in such a way that the life of those whom government regarded as its opponents would be as if in a prison camp." But whereas Bjornsson may have won the argument, the socialists had their say. In 1944–1947, the Socialist Party was in a coalition government controlling the Ministry of Education. The Minister, Brynjolfur Bjarnason, flatly refused to appoint Bjornsson a professor of economics, as tradition prescribed. Bjornsson therefore served unusually long as associate professor, for five years. But as soon as the socialists left office, he was appointed professor, in 1947 (Gissurarson 2016).

In early 1939, the Icelandic export industries, mainly the fisheries, had been on the brink of bankruptcy because of the overvalued krona. This changed, not only with the devaluation of the krona that year, but also during the Second World War when the Icelanders were the only nation to harvest fish in the fertile fishing grounds off the island and when they could sell as much fish as they wanted to in the United Kingdom and the United States. But when the War ended, this demand suddenly fell while harvests diminished as foreign vessels re-entered Icelandic waters. It was difficult to reduce nominal wages because militant socialists and communists, backed by Moscow, controlled many labour unions. Therefore, the first post-war governments reintroduced strict import and currency controls.

While the leadership of the Independence Party reluctantly went along with the controls, they also sought a way out of them. They found an economic expert who shared their concerns: Benjamin Eiriksson, the ex-communist who had in 1946 completed a doctorate at Harvard University under the supervision of Austrian economist Joseph Schumpeter. Eiriksson was now working for the Interna-

tional Monetary Fund in Washington, D.C. When the Independence Party formed a minority government in late 1949, its leadership invited Eiriksson to Iceland and asked him and Professor Olafur Bjornsson to prepare a programme for abolishing the economic controls. Their programme, which required a substantial devaluation of the krona, was accepted and implemented in 1950 by a coalition government of the Independence Party and the Progressives. However, because of sudden and unexpected economic difficulties, including the Korean War and failed harvests in the fisheries, the controls were only partly abolished then; the remainder was repealed in 1960, by a coalition government of the Independence Party and the Social Democrats.

In the 1950s and 1960s, Professor Bjornsson and Dr. Eiriksson were prominent spokesmen for free trade. Bjornsson was a respected member of parliament for the Independence Party in 1956–1971. Eiriksson however suffered a nervous breakdown in 1965 and was promptly released from his job as the director of a development fund. Whether or not there was a connection, two years earlier, Halldor Kiljan Laxness—who received the Nobel Prize in literature in 1955—had published a well-written and moving account of Vera Hertzsch’s arrest that he had personally witnessed in Moscow twenty-five years earlier (Laxness 1963).<sup>8</sup>

## An Icelandic libertarian movement

The 1960s in Iceland were characterised by a common belief that the world had seen the end of ideology. The traditionally free-market Independence Party had moved towards social democracy, and the Social Democrats had abandoned their old calls for nationalisation of key industries and a steeply progressive income tax. But the radicalisation of many young people at the end of the decade changed this and posed a challenge for those who supported liberty under the law, especially economic freedom. In 1972, a group of young people in the Independence Party took over the editorship of an old magazine called *The Locomotive* (*Eimreidin*), which had been published since 1895. The name had been chosen by the first editor and publisher to emphasise the necessity for Iceland of modernising. The ‘Locomotive Group,’ as the publishers were called, now wanted to rejuvenate the Independence Party and to make the Icelandic economy at least as free as the other Nordic economies. It was also strongly anti-communist. The leader of the group was a businessman, Magnus Gunnarsson, and it included three later prime ministers, Thorsteinn Pálsson, David Oddsson, and Geir H. Haarde, and two later Supreme Court judges as well as the present writer. While the magazine *Locomotive* folded in

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8. A book has been written in Icelandic about the tragic fate of Vera Hertzsch (Olafsson 2012).

1975, as a result of a conflict among its owners, the group of editors and writers (who had not been involved in the conflict) continued as an informal luncheon club. It had an impact on them and other Icelanders interested in economic liberty when the Nobel Prize in Economics was awarded to Hayek in 1974 and to Milton Friedman in 1976.

Younger people also became aware of, and interested, in liberal ideas. When Professor Olafur Bjornsson published a book on libertarianism and totalitarianism in 1978, he found a receptive audience. For example, I interviewed him on a radio programme and wrote a series of newspaper articles about his book. Written in a clear and accessible style, Bjornsson's book closely, and perhaps somewhat uncritically, followed works on similar issues by Mises, Hayek, and Karl Popper.

On Hayek's 80th birthday, 8 May 1979, the Icelandic Libertarian Alliance (LA) was founded by the present writer and a few other young people interested in classical liberal, libertarian, and conservative ideas. When Hayek was informed of the foundation of the LA, he expressed his delight and said that he was willing to visit Iceland in the spring of 1980. This offer was eagerly accepted, and I translated *The Road to Serfdom* into Icelandic before his arrival (Hayek 1980). Hayek gave two lectures in Iceland, on 2 April at the University of Iceland on competing currencies and on 5 April at a meeting of the LA on "The Muddle of the Middle," whereby he meant John Stuart Mill's controversial distinction between principles of production and rules on distribution. Both papers were published in my translation in a journal, *Liberty (Freisid)*, that the LA started publishing in 1980, and later reprinted in a book (Hayek et al. 1994). Hayek's message was widely discussed in Iceland. He was interviewed on television, and in a television programme a debate over his ideas took place between two economists, a liberal and a socialist. Ironically, the liberal economist who was now arguing for Hayek's ideas was Jonas H. Haralz (1919–2012), his vehement critic 35 years earlier, in the 1945 debate on the *Road to Serfdom*. Haralz had abandoned socialism and become a bank director and one of the most eloquent spokesmen for the free market, although more on grounds of efficiency than individual choice. He was also an influential adviser to the Independence Party. In 1981, the Libertarian Alliance published a collection of Haralz's essays, *Ill Fares the Welfare State*.

During his visit to Iceland Hayek was personally agreeable and intellectually alert despite being almost 81 years old. Tall, slim, whitehaired, moving with quiet dignity, speaking elegant English but with a German accent, he seemed to be precisely what he was: a scholar from the ranks of the old nobility in the Habsburg Empire. He was intrigued that in 1945 there had been a heated debate about the *Road to Serfdom* in Iceland, and he met and chatted with the chief protagonists, Bjornsson and Haralz. While in Iceland, Hayek invited me to attend the upcoming meeting of the Mont Pelerin Society, in Stanford in late 1980, and I became a

member of the Society four years later, frequently running into Hayek at the meetings. On those occasions, he was always friendly and gracious. When I went in the autumn of 1981 to Oxford to write a doctoral dissertation on Hayek's combination of conservative insights and classical liberal principles, and founded, with others students also interested in Hayek's ideas, the Hayek Society, he visited us once in Oxford, and a few of us also had dinner with him in London, in the spring of 1985.

The latter occasion was particularly memorable. Hayek was in a good mood. We were at the Ritz, and there was a group of musicians moving from one table to another, playing songs at the behest of the guests. When the band approached our table, one of us, Chandran Kukathas, who was writing a doctoral dissertation at Oxford on Hayek's theory of justice (Kukathas 1989), whispered to them to play "Vienna, City of My Dreams." When Hayek heard the tune start, his eyes lit up, he smiled broadly and started softly to hum the text of the song. Hayek also told us how Margaret Thatcher had once completely disarmed him. Soon after she became prime minister, she heard that he was in London and invited him to 10 Downing Street. She greeted him at the entrance, saying: "Professor Hayek! I know precisely what you are going to say. You are going to say that I have not done enough. And you are absolutely right!" At the end of the dinner Hayek expressed his pleasure that young people were taking interest in his ideas, but he added that he had one favour to ask us, for our own sake as much as his: It was that we would not become Hayekians, as he had observed that the Marxists were much worse than Marx and the Keynesians much worse than Keynes!

Our group in the Icelandic Libertarian Alliance was not only interested in the Chicago School's resolute use of price theory or in the Austrian conception of an economic process in which the agents slowly, and erratically, coordinated their pursuits of different aims. It was also fascinated by the public choice approach to politics, where it was deromanticised and analysed as the interplay of individuals promoting their own interest. A member of the group, Fridrik Fridriksson, in 1981 started doing postgraduate work in economics at Virginia Polytechnic Institute and University where James M. Buchanan and Gordon Tullock taught. Through Fridriksson, in the autumn of 1982 Buchanan visited Iceland and spoke about the economic analysis of politics at a meeting which was well-attended and widely discussed. His lecture was published in *Frelsid* and later reprinted in a book (Buchanan 1983; Hayek et al. 1994). During Buchanan's stay, David Oddsson who had in the spring become Mayor of Reykjavik gave a dinner in his honour at Hofdi House (which was four years later to become famous as the meeting-place for Ronald Reagan and Mikhail Gorbachev at their Reykjavik summit). Even if Oddsson was first and foremost a practical politician, he listened carefully to new ideas,

not least if they fitted in with his robust, old-fashioned individualism mixed with deep scepticism about arrogant elites.

The same year, in 1982, I published my translation of Milton Friedman's *Capitalism and Freedom*. Two years later, in the autumn of 1984, Friedman visited Iceland with his wife Rose. It is fair to say that he, like Caesar long ago, came, saw, and conquered. Small of stature, but thoughtful, witty, and totally in command of his subject, he made a strong impact. When he met the press during his first day in Iceland, a reporter asked whether he could sum up his recipe for Iceland in just one word, he replied: "Yes, I can!" Slightly surprised, the reporter asked what that word would be. "Freedom," Friedman said with a broad smile. At a luncheon given by the Minister of Trade, I introduced a Central Bank of Iceland governor to him with the words: "Here is a man, Professor Friedman, who would lose his job if your ideas were implemented in Iceland: a governor of the Central Bank." Friedman was quick to reply: "No, no. He would not lose a job; he would just have to move on to a more productive job." The Chamber of Commerce gave a dinner for Friedman, and one of the businessmen present asked him what he thought was the greatest danger to capitalism. "Look into a mirror," Friedman answered. "The greatest danger to capitalism is the capitalists themselves. They are always ready to ask for small and big favours from government. They do not like competition."

Friedman gave a lecture 1 September 1984 at a luncheon meeting organised by the Faculty of Economics and Business Administration at the University of Iceland on cooperation the Libertarian Alliance. He spoke about the "tyranny of the status quo," by which he meant the unholy alliance of three groups, politicians, bureaucrats and recipients of government transfers, whether imaginary or real. This alliance resisted all reforms and could only be reined in, Friedman submitted, by constitutional limits on the powers to tax and to print money. His lecture was published in *Frelsid* and later in a book (Friedman 1984; Hayek et al. 1994). Even if admission to the luncheon meeting cost a little less than \$40 per person (in current prices), the house was packed.

The night before, the government broadcasting service had televised a lively debate between Friedman and three left-wing intellectuals. At the close of the debate, one of the three, sociology professor Stefan Olafsson, pointed out that this was probably the first time an admission fee had been charged for a lecture at the University of Iceland (even if the lunch was included in the price). This was not his idea of freedom, Olafsson wistfully said; while he found Friedman's ideas stimulating, he could not afford to attend the lecture. Friedman was quick to reply that he thought this was not a correct use of the word 'freedom.' He had nothing against charging admission fees to guest lectures at universities. When other guests had been invited in the past to give lectures at the University of Iceland, it could not have been costless. Their travel costs and accommodation had to be paid;

meeting rooms had be rented; advertisements had to be taken out; and so on. What Olafsson meant to say, obviously, was that he wanted those who did not attend a lecture to pay for it and not only those who did attend. Icelandic television viewers all understood Friedman's message: There is no such thing as a free lecture. It should be pointed out, in addition, that the admission fee was roughly what a university student would then have spent on a jolly night out in Reykjavik. Also, although it has not been disclosed before, the reason why the Libertarian Alliance charged an admission fee was that it wanted to pay Friedman a fee for his lecture, even if he had not mentioned, let alone requested, any payment when he offered to visit Iceland. The net revenue from the luncheon meeting was used to pay him. To his great surprise, I gave him the cheque at the airport when he was leaving.

In the 1980s, gradually economic liberals, not only from the Locomotive Group and the Libertarian Alliance, but also others, gained influence. The visits by Hayek, Buchanan, and Friedman undoubtedly contributed to this, but also a stream of publications from the Libertarian Alliance and later from a small research institute, the Jon Thorlaksson Institute, which operated for a few years with the present writer as director. Those publications included collections of papers by Bjornsson (1982), Thorlaksson (1985) and Eiriksson (1987) and translations of the lectures by Hayek, Friedman, and Buchanan (Hayek et al. 1994). In 1983, Thorsteinn Palsson from the Locomotive Group was elected chairman of the Independence Party. However, under Palsson's leadership, the Party split, after he managed to offend a popular party member, and it suffered a thunderous defeat in the 1987 parliamentary elections. Palsson formed a coalition government of his Independence Party and the Progressives and the Social Democrats, but that only lasted a year because he managed to offend the leaders of the other two parties. In 1988, the present writer, having completed a doctorate at Oxford University and published it in a book (Gissurarson 1987), was appointed Professor of Politics at the University of Iceland, against vehement protests by most of the generally left-wing faculty.<sup>9</sup>

In 1989, the group which had founded the Libertarian Alliance ten years earlier decided to dissolve it, as its job of promoting classical liberalism or libertarianism in Iceland had been done. Meanwhile, liberals were also active on the political front. After the break-up of Palsson's government, many prominent members of the Independence Party felt that there was need for a more decisive leadership. The forceful and popular Mayor of Reykjavik, David Oddsson, was encouraged to stand against Palsson and in 1991 was elected leader of the Independence Party. Oddsson was like Palsson a member of the Locomotive Group, and

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9. Two other applicants for the job (neither of whom had by then completed a doctorate) complained to the Ombudsman of the Icelandic Parliament, who in his written opinion (1989) found however no fault with the appointment.

there was no basic disagreement between the two that Iceland needed comprehensive liberal reforms. In the 1991 parliamentary elections, the Independence Party won a victory, and Oddsson formed a coalition government with the Social Democrats.

## The ITQ system in the Icelandic fisheries

While the formation of the first Oddsson government certainly can be regarded as a turning point in the economic history of Iceland, in some fields reforms which had started earlier were mostly consolidated and continued. This applies in particular to the fisheries, by far the most important sector of the Icelandic economy. Iceland had extended her fishing limit four times, until it finally reached 200 miles in 1975 which meant that Icelanders became the sole users of the fertile fishing grounds in the territorial waters; earlier, around half the total catch or more had been harvested by foreigners. But at the same time, it seemed that the most valuable fish stock, the cod, was in danger of depletion, as had happened to herring some years before. Moreover, it was clear that too much capital had been invested in the fisheries, as economists would have predicted about any non-exclusive resource.<sup>10</sup> The fishing fleet had grown much faster than the total catch. The government decided to try and limit effort, defined as fishing days out at sea, but this did not seem to be successful, at least not in reducing over-investment.

In the autumn of 1980 when I was still a student of history at the University of Iceland, I was invited to a conference at Thingvellir, the site of the old Icelandic parliament, on “Iceland in 2000.” One speaker after another asserted that capitalism could not deal with environmental problems such as overfishing. Instead, judicious government planning was needed. From my reading of Mises and Hayek, I had drawn the conclusion that individual property rights and their free transfer in a market were necessary to bring about the most efficient utilisation of resources. In the general discussion at the conference, I therefore stood up and innocently suggested that property rights be defined either to particular fish stocks or to particular fishing grounds, and then the problem spontaneously would be solved by the owners. Needless to say, my suggestion was derided, and a journalist from the socialist newspaper *Thjóðviljinn* who was present at the conference wrote ironically in his paper that “he had found a solution to the problem of utilising fishing grounds. It was either to entrust the fisheries to a public company which would charge an admission fee to them, or to hand over to fishing firms the full ownership of the fishing grounds previously held in common” (Bergmann 1980).

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10. See the papers already cited by Jens Warming, H. Scott Gordon, and Antony Scott.

Something like that, however, is what happened, not because people started to listen to me, but because groping for solutions, in a process of trial and error, the Icelandic fishing community, in cooperation with government agencies, developed a feasible system in the fisheries. After the collapse of the herring stock in the late 1960s, a complete moratorium on herring was imposed. In 1975, harvesting of herring started again, governed by catch quotas which each herring boat received. In 1979, the herring quotas were made transferable to make the system more flexible. A similar system was also introduced for capelin, a pelagic fish similar to herring. But in the far more important demersal fisheries it proved difficult to solve the problem of overfishing.<sup>11</sup> After attempts to limit fishing effort failed, the government decided to try and limit catch instead, as had been done in the pelagic fisheries. In 1984, it allocated catch quotas to fishing vessels according to their catch history in the previous three years. If a vessel had for example harvested 1 per cent of the total catch in cod during this period, then it received a quota consisting in a permit to harvest 1 per cent of the total allowable catch in cod over the fishing season. First, the catch quotas were only allocated for a year, and then for two years, and then without a time limit. They were also gradually made transferable.

The experience with the individual transferable quotas (ITQs) was generally positive, and in the spring of 1990 the system was made comprehensive, as I strongly supported in a book which I published during the deliberations of the parliament on the issue (Gissurarson 1990). The Ministry of Fisheries sets a total allowable catch (TAC) in each fish stock, and it allocates catch quotas—a proportion of the TAC—to each fishing vessel. The quotas are freely transferable, which means that overinvestment could be reduced. The more efficient fishermen bought quotas from the less efficient, who left the fisheries, and subsequently the buyers combined the new quotas with their own quotas better to utilise their fishing vessels. The quota holders also gained a vested interest in maximising the long-term profitability of the resource of which they regarded themselves as being partial residual claimants. Their behaviour changed: They wanted the Ministry of Fisheries to set the TAC cautiously, and they invested in research and development (Arnason 2008; Gissurarson 2000; 2015a). It amounted to a quiet revolution: The owners of fishing firms accepted the great reductions of TACs in various fish stocks that turned out to be necessary in the early 1990s.

From the outset, the ITQ system was nonetheless controversial in Iceland. Initially its opponents argued that catch quotas were not as effective in hindering overfishing as effort limits (such as fishing days), but those voices fell slowly silent as the efficiency of the system was amply demonstrated. However, the very success

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11. Pelagic fishes roam around close to the surface of the sea and migrate over long distances, whereas demersal fishes like cod tend to stay in the same deep underwater locations.

of the system has given occasion to harsh criticisms. Some people resent that the fishing firms have become profitable unlike their counterparts in most other countries. These critics point out that the owners of the firms initially received the quotas on the basis of catch history, and not in a government auction. Friedman's former opponent on Icelandic television, Stefan Olafsson, writes, for example: "This form of original allocation was by many seen as unfair, closing the formerly open access to the commons that the fishing grounds had been and producing privileges in a more closed industry" (2011, 18). But it is difficult to see who was being unfairly treated by the introduction of ITQs: According to fisheries economists, from Jens Warming to H. Scott Gordon, under open access to a fishery fishing effort will inevitably increase to the point when there is no more profit to be gained in the industry—when access becomes worthless. It was this state of affairs which was being corrected by the introduction of ITQs.

Two interesting and often overlooked points can be observed from the simple but generally accepted economic analysis of overfishing. First, under open access, there is enormous waste. This waste consists in utilising many more boats than necessary to harvest the total catch. The special profit captured by the initial quota holders consists in the elimination of waste within their sector of the economy, and not in a transfer of a good from some to others. A second point, particularly important in discussions of initial allocation, is that the only right of which others are deprived with this enclosure of a commons is the right to become the last fisherman in and to harvest fish at no profit. This is by definition a worthless right. Nothing of any value is really taken from others when the fishing grounds are enclosed. Nobody is therefore being unfairly treated.

It is true that the ITQ system is still a source of conflicts in Icelandic politics, paradoxically not because of its failure, but because of its success. But it should be observed that the alternative method of initial quota allocation which some Icelandic intellectuals suggested, a government auction, would have caused much graver conflicts.<sup>12</sup> The idea would have been to reduce the number of boats in the Icelandic waters by government auctioning off the quotas in such a way that only the more efficient boat owners would have been able to rent the quotas and to continue harvesting fish. But the more efficient boat owners would not have been better off, because they would simply have paid to government for the quotas what they previously spent on their boats, fishing gear and acquisition of fishing skills. They would not therefore have had any incentive to support the enclosure of the Icelandic fishing grounds. More importantly, the less efficient boat owners

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12. The following objections would also have applied to the idea of imposing a special tax on the fishing firms in order to reduce fishing effort, and keeping the tax high enough that only half of the fishing fleet could have continued in operation.

would have had to leave the fisheries because of their inability to buy the quotas. They would have lost in just one day, at the stroke of a pen, all their investment in boats, fishing gear and fishing skills. They would therefore indeed have had a strong incentive to oppose this change—generating great conflict. The only agent that would have been better off by the change would have been government.

The difference between the two alternatives can be put differently. A social change is said to be Pareto-improving if all or at least some benefit by it, while nobody is worse off (Buchanan 1959). Initial allocation on the basis of catch history is Pareto-improving in this sense. Initially, the boats receive the right to harvest the same amount as they had previously. Then some buy new quotas, while others sell theirs and leave the fishery, quite content with their money. But initial allocation by a government auction is not Pareto-improving. Government is much better off. Those remaining in the fishery are no better and no worse off. Those who suddenly have to leave the fishery because of their inability to pay for the quotas are much worse off. They are suddenly being deprived of their livelihood. These considerations may explain why Icelandic politicians chose allocation by catch history (sometimes called grandfathering) rather than by government auction. It was not because they knew anything about Pareto optimality, but because they did not want to lose votes.

Now, in 2017, catch quotas have been in place for 42 years in the herring fishery and for 33 years in the much more important demersal fisheries, such as cod. Most of the quotas held by individual fishing firms have been bought at market prices. Nevertheless, Professor Olafsson, economics professor Thorvaldur Gylfason (2000), and some other intellectuals still think it is feasible for government to seize the quotas from the fishing firms and to auction them off. The present writer has however not been the only university professor defending the ITQ system. Professor Ragnar Arnason has for decades been a forceful advocate of the system. Originally a socialist, he changed his view when he studied resource economics, obtaining a doctorate from the University of British Columbia in fisheries economics in 1984 and becoming professor in fisheries economics at the University of Iceland. Even if the ITQ system was mainly developed by stakeholders, cooperating with government agencies in a process of trial and error, Arnason made an important contribution to its development as an adviser to various government bodies, encouraging transferability, and also by publishing several scholarly works on the issue (1990; 2008; Neher et al. 1989; Arnason and Gissurason 1999; Arnason and Runolfsson 2008).

In debating the ITQ system, Professor Arnason identifies three fallacies in the argumentation of those who want now to seize the quotas from the fishing firms. First, it is not correct that the fisheries' profit (or resource rent) is derived from the resource alone and is not created in any way by the fishing firms. If it

were true, why then was the income from the fisheries not much higher in the past when much more was harvested from much bigger stocks? In the second place, it is not correct that the quota holders are the only ones to benefit from the system of exclusive rights. In the end, everybody benefits when a sector of the economy becomes profitable. The fishing firms pay taxes and employ people, and since they export most of their products they keep the exchange rate for the krona higher than it otherwise would be. Their owners use their profits for consumption or investment. Thirdly, it is not correct that a resource tax, imposed directly or indirectly on the fisheries, would not reduce the total fisheries profit. It would reduce the international and domestic competitiveness of the Icelandic fisheries, discourage research and development in the fisheries, and weaken the incentives the fishermen have to try and maximise the long-term profitability of the resource, for example by a cautious setting of the total allowable catch (Arnason 2012; 2013; 2016). Moreover, by creating a new source of income for the politicians, political rent-seeking would be encouraged (Runolfsson 1999).

Three of Arnason's colleagues at the Faculty of Economics at the University of Iceland have also publicly defended economic liberty, including the ITQ system. Professor Thrainn Eggertsson (b. 1942) is internationally known for his contributions to institutional economics, which he has applied to several Icelandic subjects (Eggertsson 1990; 1992; 1996; 1998). Professor Birgir Thor Runolfsson (b. 1962) wrote his doctoral thesis under Buchanan and Tullock on the Icelandic Commonwealth and has published papers on that subject as well as on the fisheries (Runolfsson 1993; 1999). Professor Asgeir Jonsson (b. 1970) mainly writes on finance (Jonsson 2009; Jonsson and Sigurgeirsson 2016), but he has also explored Icelandic economic history in the spirit of Sigurdsson. Two other well-known economists have often publicly supported liberal ideas, Dr. Vilhjálmur Egilsson (b. 1952), as Director of the Icelandic Chamber of Commerce, and Dr. Tryggvi Th. Herbertsson (b. 1963), as Director of the Institute of Economic Studies at the University of Iceland. Both Egilsson and Herbertsson were for a while members of parliament for the Independence Party.

## Concluding remarks

The ITQ system is an important part of the story of liberalism in Iceland because the fisheries are such a large part of the Icelandic economy. Whether the creation of the ITQ system is credited to liberal individuals or to a small, relatively cohesive society simply groping its way to an efficient arrangement—which seems much more plausible—it represents a major success for liberalism in Iceland. Building upon this achievement, the governments led by Oddsson between 1991 and

2004—when I was his informal adviser—embarked upon a comprehensive programme of privatisations and tax cuts, while abolishing special investment funds, ceasing to subsidise loss-making enterprises, reducing inflation to the same level as in the neighbouring countries, strengthening the occupational pension funds, and practically eliminating the public debt. When Iceland in 2004 celebrated 100 years of home rule, the country seemed, like New Zealand or Thatcher’s Great Britain, to be a poster child for economic liberalism. But this abruptly changed with the 2008 bank collapse, about whose nature and causes an influential anti-liberal narrative has been constructed, not least by Icelandic left-wing intellectuals such as Stefan Olafsson and Thorvaldur Gylfason. Indeed, for some Iceland has even become the poster child of ‘neoliberal’ folly (Chang 2010; Peck 2010; Hine and Ashman 2010; Wade and Sigurgeirsdottir 2010; Loo 2011; Pálsson and Durrenberger 2016). One of the prominent foreigners who accept the anti-liberal narrative is Nobel laureate Paul Krugman, who wrote regarding Iceland that an “economy that produced a decent standard of living for its people was in effect hijacked by a combination of free-market ideology and crony capitalism” (2010). The anti-liberal narrative on Iceland in the years 1991–2017 merits a detailed discussion which will be provided in a second article.

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## About the Author



**Hannes H. Gissurarson**, born in 1953, holds a B.A. in philosophy and history and a cand. mag. [M.A.] in history from the University of Iceland, and a D.Phil. in politics from the University of Oxford. The author of more than fifteen books on politics, history and current affairs, in English, Swedish, and Icelandic, he has been professor of politics at the Department of Politics at the University of Iceland since 1988. He has been a Visiting Scholar at the Hoover Institution, Stanford University, at UCLA, at LUISS in Rome, and at several other universities. In 1998–2004 he served on the board of the Mont Pelerin Society and in 2001–2009 on the supervisory board of the Central Bank of Iceland. He is director of academic studies at an Icelandic think tank, **RNH**, Rannsóknarsetur um nyskopun og hagvoxt [Research Centre on Innovation and Economic Growth]. His email address is hannesgi@hi.is.

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# My Most Regretted Statements: A Symposium Prologue

Daniel B. Klein<sup>1</sup>

For the symposium presented here, we invited several leading intellectual figures to tell of their most regretted statements and to reflect on why they now regret those statements. We suggested a maximum length of 1,500 words.

Imagine that Jane Jacobs or Elinor Ostrom had written a 1,500-word reflection, “My Most Regretted Statements.” That would tell us about the doubts she had about her own beliefs, the risks she took, how her thinking evolved, and how she felt about her own published statements. It might illuminate her attitude toward other statements not included as among her most regretted statements. The symposium invited the contributor to open up to the reading public, to help the reading public to get to know the contributor. Also, it gives the contributor an opportunity to qualify some of the discourse she has put on the record.

The following passage from Adam Smith expresses the spirit of the project:

Frankness and openness conciliate confidence. We trust the man who seems willing to trust us. We see clearly, we think, the road by which he means to conduct us, and we abandon ourselves with pleasure to his guidance and direction. . . . The great pleasure of conversation and society, besides, arises from a certain correspondence of sentiments and opinions, from a certain harmony of minds, which like so many musical instruments coincide and keep time with one another. . . . We all desire, upon this account, to feel how each other is affected, to penetrate into each other’s bosoms, and to observe the sentiments and affections which really subsist there. The man who indulges us in this natural passion, who invites us into his heart, who, as it were, sets open the gates of his breast to us, seems to exercise a species of hospitality more delightful than any other. No man, who is in ordinary good temper, can fail of pleasing, if he has the courage to utter his real sentiments as he feels them, and because he feels them. (TMS, 337)

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1. George Mason University, Fairfax, VA 22030.

Smith also describes the sentiments of one “who, from false information, from inadvertency, from precipitancy and rashness, has involuntarily deceived”:

[I]f he is a real lover of truth, he is ashamed of his own carelessness, and never fails to embrace the first opportunity of making the fullest acknowledgments. If it is in a matter of some consequence, his contrition is still greater; and if any unlucky or fatal consequence has followed from his misinformation, he can scarce ever forgive himself. Though not guilty, he feels himself to be in the highest degree, what the ancients called, *piacular*, and is anxious and eager to make every sort of atonement in his power. (TMS, 338–339)

In the symposium, seven authors generously share their reflections on their most regretted statements:

- Monique Bégin tells of a statement she often repeated in her time as Canada’s Minister of National Health & Welfare: “Canada is the Sweden of the Americas.”
- Michael Boskin reflects on his time as Chairman of the Council of Economic Advisers and the hazards of misattribution, of not controlling op-ed titles, and of equations going missing.
- Tyler Cowen reflects on his circa 2007 underestimation of the likelihood of a major financial crisis.
- Jon Elster draws from his work on defective belief formation, illustrating with his own past errors, including about the electorate binding itself and about thinking of anti-communists “as a clock that is always one hour late rather than as a broken clock that shows the right time twice a day.”
- Richard Epstein tells of his conversion to consequentialism.
- Sam Peltzman relates his hardy forecast in 1988 of Michael Dukakis’s impending victory over George H. W. Bush.
- Cass Sunstein begins: “I have said a lot of things that I regret.” And he ends: “A main job of academics is to float ideas and take risks, and if they do not make mistakes, or learn enough to change their minds, well, that’s really something to regret.”

We hope that the symposium will be of interest to everyone who takes public discourse seriously. Any leader in intellectual life has a personality, a character, that reflects higher-order interpretations, beliefs, and judgments. For those, she has to answer to her own conscience. Sharing insight into such matters might advance understanding and cohesion in public discourse. We are grateful to the

seven contributors for their generosity and for their openness in sharing their regrets.

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# My Most Regretted Statements: Canada as a Welfare State

Monique Bégin<sup>2</sup>

I was among the first women elected from Quebec to Member of Parliament, with a large majority, and I was re-elected three times, serving as an MP from 1972 to 1984. During that time, in mid-September 1977, Prime Minister Pierre Trudeau appointed me to Cabinet as Minister of National Health and Welfare, the biggest Department of the Canadian government, with its 25 percent of the federal budget. I was also responsible for the Medical Research Council. I was Minister during 1977–1979 and 1980–1984.

We revel in thinking of Canada as a great place to live, a society not afraid of offering both a universal ‘medicare,’ prepaid for all through general taxation, and a safety net to its people. We see that as our trademark in North America. But how much of a reality is that, and how much a myth?

Just before my appointment in 1977, a major restructuring of the federal funding formula for health care for the provinces had been unanimously agreed upon. The new formula shifted federal funding determinations almost entirely to Finance, rather than Health Canada. I had not really been briefed on our Medicare system. The feds were covering roughly 50 percent of all costs related to hospitals and to doctors practice, based on universal, free access.

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2. University of Ottawa, Ottawa, ON K1N 6N5, Canada.

So, I immediately got involved with social policies. My dream, which I innocently announced to the media, was to institute a “guaranteed annual income” under one form or another (negative income tax, ‘mincome,’ etc.). When I was apprised by my Deputy Minister of the real state of the economy, and when observing the rapid success of Milton Friedman’s monetarist policies, I concluded for myself that I would be lucky if I could, at the most, save the universality of Family Allowances and of Old Age Pensions.

Over more than seven years, 1977 to 1984, I managed to save the universality of these federal programs, create a federal new Child Tax Credit for families most in need (lone mothers with children), and increase pensions and adapt them to the various conditions lived, in particular by new Canadians and by women alone. I was very proud of my very last piece of legislation in the House of Commons, at the end of June 1984, which included several improvements to our pensions system such that our universal pensions system, for the first time in our history, would be lifting all seniors above the poverty line, which it did.

When in 1984 Pierre Trudeau left politics for good, I had long before, without saying a word to anyone except to him, decided to quit as well. I recycled as an academic, at the University of Notre Dame, as Joint Chair in Women’s Studies Ottawa and Carleton Universities, and as Dean of Health Sciences and Visiting Professor in Health Administration at the University of Ottawa. The numerous speaking engagements and participation in networks, committees, and commissions became so time-consuming that I had to drop social policies from my agenda, focusing on protecting our universal Medicare—what I am known for in Canada—which was then under serious attacks.

Sometime in 1993, University of Toronto political scientist Carolyn Tuohy, an expert on Canadian institutions and on health care systems, had written:

Canadian social policy presents a puzzle. On the one hand, it comprises a relatively niggardly set of policies directed at income security—notably public pensions and social assistance. The one relatively generous income-maintenance program, unemployment insurance, has been the focus of ongoing controversy. On the other end, Canada has adopted a system of national health insurance that is both generous and outstandingly popular. Why have Canadians been so parsimonious and chary in protecting individuals and families against poverty, and so generous and enthusiastic in protecting them against the cost of health care? (Tuohy 1993, 275)

I discovered that text years later. I did not know its author personally although she had a name and would become Deputy Provost and Vice President, Government and Institutional Relations, at the University of Toronto.

I couldn't believe my eyes when I came to that text. As social security was not her specialty, I thought at first that she was wrong. When giving speeches in the U.S., I had—repeatedly, and in complete good faith—started by stating that “*Canada is the Sweden of the Americas.*” No one, ever, either in America or back home, had confronted me, let alone questioned it.

Then, in 1998, a study by the Centre for International Statistics prepared for the Canadian National Forum on Health was published, giving a comparative table of total public social expenditures for 1990–1993 for several countries, as a percentage of their GDP (Centre for International Statistics 1998, 163). Sweden, Denmark, Norway, Canada, the U.S., and others were being compared for their total spending for income security, education, unemployment insurance, and smaller other programs, income security being by far the largest component of this statistical picture. It clearly illustrated the point: Canada was way below the Nordic countries, and in fact only somewhat better than the U.S., for total social expenditures. Where Sweden invested some 39.6 percent of GDP, we spent 21.9 percent, and the U.S. spent 15.6 percent. And that was before Canada's major reductions to unemployment insurance benefits, and before the 1995 cuts by Prime Minister Chrétien of some \$30 billion in transfers to the provinces, of which a major share was applied by the latter to reduce social assistance and social services and programmes.

I still had trouble believing it. Later I checked an OECD report on total public social expenditure as a percentage of GDP for 29 countries, 1980–2001. The same pattern was there: Canada was 24th in welfare spending, followed by Japan, the U.S., Mexico, and Korea. Ahead of us were 23 European countries, including Poland, the Czech Republic, Hungary, and Slovakia.<sup>3</sup>

By then and for the years after (March 2005–August 28, 2008), I was involved with the WHO International Commission on Social Determinants of Health, of which I was a member and which was a unique and enriching experience. I did my best to repair my seriously erroneous statements of the past, waking us to the poverty in our midst, trying to create images I had never used before. I ask, for example, why Montreal West Island's or Hampstead's life expectancy for males is 79.5 years while it falls to 68.6 years in the Maisonneuve-Rosemont neighbourhood, and to only 66 years in the downtown south area (CLSC des Faubourgs, from Sherbrooke Street down to the old harbour, east of Drummond and McGill Streets)? How come that in 1981 there were 30 higher-poverty neighbourhoods in the City of Toronto, and 120 by 2001?<sup>4</sup> How is it that, in the country of lakes and

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3. Current data is available through the OECD Social Expenditure Database ([link](#)).

4. See United Way of Greater Toronto and Canadian Council on Social Development (2004, 20).

rivers, of the 600 First Nations reserves of Canada, some 100 still do not have safe, clean water?

One problem is that Canadians like to believe they are a very egalitarian society, a classless society. We are not. Canada is a country that is so rich that it manages to mask reality, making poverty invisible. Inner-city neighbourhoods have been gentrified or marginalized. Homelessness has been normalized. So have food banks.

In December 2008, while in Vancouver talking of the causes of poorer health, I was interviewed by *The Province* and I suddenly decided to apologize. The headline read: “Former health minister says she was wrong—Monique Begin: Says Canada not a model of social and economic justice.” The opening paragraphs follow:

Monique Begin considers the human tragedy playing out daily in Vancouver’s Downtown Eastside and shudders at the memory of her once firmly held view of Canada as “the Sweden of the Americas.”

Not only did she believe it, Begin says, she used to spout it regularly as Pierre Trudeau’s feisty minister of health and welfare from 1977 to 1984—proudly comparing Canada with the European country many experts held up then, as they do now, as a model of social and economic justice and well-being.

“Well, I made a huge mistake,” Begin says now. “Canada’s the least bad of the Americas, but it’s not Sweden by a long shot.”

A quarter century later, Begin is on her latest mission to erase the rosy image once and for all by telling anyone who will listen that inequities in Canada’s social underpinnings—involving everything from education and family income to jobs and housing—have more of an impact on the health of Canadians than medical treatment. (*Province* 2008)

So the route towards tackling ‘the causes of the causes’ of poor health in Canada is certainly not that of investing more money into the health care system. We have one of the most expensive health-care systems of the world, and we cover only hospitals and physicians, with some 30 percent of total health care costs (drugs, therapies, rehabilitation, chronic care, etc.) having to be borne by individual Canadians. Re-balancing the budgets away from health spending in favour of welfare and social policies is what is needed. And the need is urgent.

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## Fewer Than Sinatra: Three Quasi-Regrets

Michael J. Boskin<sup>5</sup>

When invited to participate in this issue of *Econ Journal Watch*, devoted to the subject “My Most Regretted Statements,” my initial impulse was to decline. First, even in the latter stages of my career, I try to look forward, not backward. Second, as Frank Sinatra croons in “My Way,” “Regrets, I’ve had a few, but then again, too few to mention.” Of the three items that fall even remotely into that category, two involve things I never actually said or wrote, but still may provide useful perspective for others.

First, in one of the unusual Washington rituals where your opponents put words in your mouth, I was alleged to have opined that it doesn’t matter whether the U.S. economy produces computer chips or potato chips. A clever quip, but I never said it. Indeed, after being misquoted a few times, including by some Silicon Valley friends and in several business magazines, I wrote a correction that was published in *Fortune* magazine (Boskin 1991). But that didn’t stop people from continuing to ‘quote’ me, putting the alleged quotation on Wikipedia, and the like.

It is likely the quip came from someone objecting to my strong resistance to the government picking winners and losers among technologies and firms by the granting of special subsidies. I was an opponent of industrial policy throughout my CEA Chairmanship for President George H. W. Bush, and was glad to see it also mostly rejected by the Clinton Administration. And I remained opposed

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5. Stanford University, Stanford, CA 94305.

to industrial policy thereafter, including to its extensive use by the Obama Administration, which—despite internal doubts, including those of Larry Summers (see Lipton and Wald 2011)—produced such marvels as a bankrupt Solyndra and a multibillion-dollar subsidy that was used as the excuse to launch California’s (no longer fast enough to be called a) ‘bullet train,’ which will be the biggest white elephant in the state’s history.

If my first ‘regret’ above is over something I never said, the second one is over something I never wrote. Later in my career, I have taken more to writing op-eds. I have written frequently for the *Wall Street Journal*, which reserves authority over the published title of an op-ed, and the author only sees the title upon publication. While the *Journal* usually does an excellent job of providing a catchy title that nevertheless conveys the essence of what is said, I am sure I am not alone among its authors who on rare occasions wince at the chosen title. One of the very few, in many years of writing, was “Obama’s Radicalism Is Killing the Dow” (Boskin 2009). Several on the left have used the title to argue that I and others who disagreed with President Obama’s economic policies didn’t know what we were talking about. I certainly don’t mind being held accountable for what I write, and in fact what I wrote in this op-ed had exactly one-half of one sentence about the stock market. The other 99.5 percent was what I saw as the likelihood that President Obama’s attempts to radically re-engineer large swaths of the American economy, using regulation, tax subsidies, and industrial policy, would slow the recovery.

While I certainly did not foresee that the stock market’s rebound would be as large as it was (though I did predict a rebound), I believe that the extent of the rebound mostly reflected natural economic forces, plus the Federal Reserve’s monetary policy of zero interest rates—year after year—with the explicit goal of pushing people into the stock market to ‘reach for yield.’ Also, recall the 2010 Republican election sweep and subsequent fiscal compromises. But I’m very leery of using the stock market as a reliable forecasting instrument. As Paul Samuelson (1966) famously quipped, “Wall Street indexes predicted nine out of the last five recessions.” It’s one noisy input. But after the 2009 trough, the stock market certainly did rebound quite strongly.

The stock market aside, the economy recovered only slowly. There is substantial research evidence that the Obama-era regulation and uncertainty were two of the prime causes of the abnormally slow recovery. My only discussion of forecasts in the article was to excoriate the Obama Administration for its optimistic economic growth forecasts. Despite all the government micromanagement, President Obama’s team projected a much shallower recession and much stronger recovery than what transpired and what made sense to me. In fact, the Obama Administration was wildly optimistic *year after year*, projecting 4 percent growth in the following two or three years that never got much above half that. So I think

what I wrote holds up well, despite the easily caricatured title the *Journal* gave the piece.

These two episodes of things I neither said nor wrote are not quite personal regrets, but are more regrets over how the dominant style of policy discussion has evolved away from substantive debate into social-media attacks and counterattacks. I learned from these two episodes that in the highly politicized, instant-communication Internet age, you need to develop a thick skin. Otherwise you can spend a lot of time just adding to the continual barrage of tweets and posts.

My one real regret stems from an early draft of a paper I wrote that not only was never published, but was never even put out as a working paper. I developed a simple accounting model of the effects of deferred taxes such as 401(k)s and IRAs and how these effects depended upon numerous economic parameters, such as: how much of the saving flowing into such programs was new saving and how much was diverted from other saving, expectations of rates of return, inflation and future tax rates, eventual consumption propensities, and so on. I wrote out a simple eight- or ten-equation model, calibrated it to the data, and had an extremely capable research assistant run alternative scenarios. When the results came back with effects quite a bit larger than I'd originally anticipated, I told the RA to give the model to another one of my research assistants to run independently, from scratch. The results came back the same and so, after including much sensitivity analysis, I wrote it up and sent a draft around for comment to some scholars who I thought would have useful advice.

This occurred just as academic economists started to circulate work electronically, and it was the first thing I had written after returning to work following a near-fatal accident. It was certainly a lesson for me, for one of the equations had inadvertently been dropped when my admin typed it up for my RA from my handwritten model, and thus it was dropped also in the coding. The error wound up compounding the effects to a large overestimate. I started getting calls and messages that something was wrong, and I went back and did things from scratch again, when I discovered, painfully, that the equation had been inadvertently dropped. So I immediately sent out a note to everyone that, while the part of the paper that dealt with the size and implications of the current deferred taxes was fine, there was an error in the simulations, they should be disregarded, and I was withdrawing the paper. Even in the world of 2002, it became politicized fodder for a short period.

There are two lessons there. First, don't just double-check results, especially those that look unusual; triple-check them. If necessary, do it yourself. That means going over every step in the chain of evidence. While my assistants were embarrassed and deeply upset, I would not let them blame themselves. This was all on me. It was my responsibility; I very publicly said so, and it was the right thing to do.

A number of people subsequently told me that they thought that such screw-ups were less uncommon in academe than generally supposed and that they suspected many people just cover up their mistakes and bury them with their data. I urge any reader who might be looking for some career guidance on this never to do anything other than get the truth out, whatever the consequences. This was a mistake, not a calamity.

Second, and this is a lesson common to all three regrets, is to accept accountability for your words and actions. Clarify others' mistakes about things you've said or written (note: this does not include legitimate criticism) and realize that, unfortunately, any serious piece of research, let alone an op-ed, pertaining to any aspect of economic policy, is now highly politicized in the mosh pit of instant Internet communications and social media.

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## My Biggest Regret

Tyler Cowen<sup>6</sup>

I define regret as not necessarily implied by error. Regret is the sentiment that, ex ante, I should have been more careful, given what I either knew or should have known at the time. Not thinking Donald Trump would be elected president

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6. George Mason University, Fairfax, VA 22030.

clearly was an error of mine, but I still think at the time it was a pretty reasonable thing to believe, so it is an example of error without regret.

My biggest intellectual regret is not having assigned a greater likelihood to the financial crisis circa 2007.

Here is part of a *Marginal Revolution* blog post I wrote on November 19, 2007:

Paul Samuelson, pessimist: “Today, Federal Reserve Chairman Ben Bernanke admits that nobody, including him, is able to guess how near to bankruptcy the biggest banks in New York, London, Frankfurt and Tokyo might be as a result of the real estate crisis.”

Taken literally, Samuelson is correct. No one can say how near to bankruptcy those banks are but that is because they are not very near to bankruptcy. Subprime crisis or not, most people are still paying off their mortgages quite comfortably. Many [bank share prices are down](#) but the major banks are not hovering close to  $p = 0$ .

I’m not sure what Samuelson counts as “today,” but using Google News I cannot find any such statement by Bernanke and if it had been made it would be a) grossly irresponsible, b) headlines, and c) the market would have plunged dramatically. The most likely possibility is that this passage is a simple untruth, not representing what Bernanke said.

Samuelson draws an analogy between today’s subprime crisis and Herbert Hoover claiming the Great Depression would end soon. It’s worth noting that Hoover faced high unemployment, radical deflation, incompetent monetary policy, bank runs, and a lack of automatic stabilizers, none of which are the case today.

It is amazing how pessimism and the desire to blame will cloud men’s minds. (Cowen 2007)

The post’s closer was a bit of a saving grace for me:

It can be said, however, that if further bad things were to happen, “the crisis so far” would mean we have much less room to maneuver. So I’m not telling you that everything is fine, I am simply putting this piece in perspective.

Now, to be sure, most of my claims in the blog post were literally accurate. Bank share prices, at the time, were not close to zero. And Samuelson (2007) was deeply irresponsible to fabricate this sentiment and attribute it to Bernanke—consider that an early example of ‘fake news.’

Still, at the time I badly underestimated the chance that something systemic had gone wrong in the American economy. I remember thinking there was a very real chance of a real-estate bubble, but I thought it would be like the real-estate bubble of the late 1980s, in which case it would lead to a slight recession but not an event to be remembered in the broader scheme of history.

One mistake I made was to think too little about the fragility of America's shadow banking system, but unfortunately my mistakes ran deeper than that. The more general mistakes I made took a few forms. First, I had too much confidence in observed market prices. Second, I had too much confidence in the quality of corporate governance within banks. At the time, I thought, "Those are sophisticated managers and CEOs with a lot of their own money on the line. There is no reason to think they will let things get out of control." I just didn't think that a real-estate bubble could be so far along and so extended as to endanger bank solvency. Third, I just had too much confidence in my judgments.

On all counts I was wrong! And so when 2008 came along, I felt rather silly. I had to perform a major revision of my views on quite a few matters. My underlying ignorance was not just a lack of understanding of some details about shadow banking.

That all said, I think we (and I) need to be very careful. We should not overreact and now assume that all precarious situations will blow up financially. Most of them still will not, and to presume otherwise would be to show that no real lesson had been learned from the history of our own errors. We shouldn't assume that the most recent events are always the best predictors of what lies around the corner.

I also think, in retrospect, that too much reliance on the notion of a real-estate bubble is misleading. In so many of the affected areas, real estate prices are now higher than they were in 2006! There was a real-estate bubble, and a huge one, near Las Vegas, near Orlando, and in much of Arizona. But was there a real-estate bubble in America's high-productivity cities such as New York and San Francisco? Probably not, even though for a while prices took quite a tumble. The high prices in fact seem to have proven themselves sustainable. And so, looking back, we have to question just how general the real-estate bubble was. Arguably the financial system had some fragility issues that intersected with some regional real-estate bubbles but were not merely reducible to real-estate problems. To put it in other words, the real mystery is the 'negative price-movement bubble,' in many regions, starting in 2008–2009 but lasting only a few years.

Overall, there is still quite a bit we don't understand about the crash of 2008. But in 2007, I thought I knew pretty well what was going on. I didn't. I regret that. I regret that I was wrong, and I regret that I was overconfident in my belief that I was right.

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# My Most Regretted Statements

Jon Elster<sup>7</sup>

*[Editor's note: Upon receiving the invitation to contribute to the present symposium, Jon Elster responded by noting that in his published work he had illustrated defective belief formation by sharing some of his own regrets about his own past statements. He kindly authorized us to reproduce the following passages, as part of the symposium.<sup>8</sup>]*

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Because it is often easy to detect the operation of motivated belief formation in others, we tend to disbelieve the conclusions reached in this way, without pausing to see whether the evidence might in fact justify them. Until around 1990 I believed, with most of my friends, that on a scale of evil from 0 to 10 (the worst), Communism scored around 7 or 8. Since the recent revelations I believe that 10 is the appropriate number. The reason for my misperception of the evidence was not an idealistic belief that Communism was a worthy ideal that had been betrayed by actual Communists. In that case, I would simply have been victim of wishful thinking or self-deception. Rather, I was misled by the hysterical character of those who claimed all along that Communism scored 10. My ignorance of their claims was not entirely irrational. On average, it makes sense to discount the claims of the manifestly hysterical. Yet even hysterics can be right, albeit for the wrong reasons. Because I sensed and still believe that many of these fierce anti-Communists would

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7. Columbia University, New York, NY 10027.

8. The sources for the three passages are Elster 2015, 125 n.11; Elster 2015, 475; and Elster 2000, ix.

have said the same regardless of the evidence, I could not believe that what they said did in fact correspond to the evidence. I made the mistake of thinking of them as a clock that is always one hour late rather than as a broken clock that shows the right time twice a day. Later, I made the same mistake about members of the ecology movement.

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Scholars sometimes go wrong because of the strong tendency of all human beings to find meaning and order in the world, causing them to search for agency, objective teleology, and analogy. ... [I]t seems appropriate, in a chapter where I criticize other scholars, to recount some of my own failings. On three occasions in the 1970s, I fell victim to the lure of analogy, and perhaps also of teleology. In a book in Norwegian from 1971, I drew a parallel between the impossibility of predicting technical change and Gödel's incompleteness theorem. When a logician colleague at my university raised his eyebrows, I realized the foolishness of the analogy. In a book in French from 1975, I approvingly cited Jacques Lacan's analogy between Marx's concept of surplus-value (*Mebrwert*) and Freud's concept of surplus-pleasure (*Mehr von Lust*). I did not need help to quickly realize how stupid that comparison was. In a book from 1979, I claimed that the system of periodic elections without the possibility of recalling representatives "can be interpreted [as] the electorate's method of binding itself and of protecting itself against its own impulsiveness." Needless to say, no electorate ever did anything of the kind. In that case, the flaw in my reasoning may have been due either to a misplaced analogy between individual and collective self-binding or to objective teleology. In getting rid of my confusion, I was assisted by a history professor who told me bluntly, "In politics, people never try to bind themselves, only to bind others." An irony is that I proposed this "interpretation" in a book, *Ulysses and the Sirens*, which among other things was a crusade against functionalist explanations.

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Chapter II [of *Ulysses Unbound*] reflects a change in my view about *constitutions* as precommitment devices. I have been much influenced by a critical comment on *Ulysses and the Sirens* by my friend and mentor, the late Norwegian historian Jens Arup Seip: "In politics, people never try to bind themselves, only to bind others." Although that statement is too stark, I now think it is closer to the truth than the view that that self-binding is the essence of constitution-making. Ulysses bound *himself* to the mast, but he also put wax in the ears of the rowers.

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# My Methodological Flip-Flop on Individual Liberty

Richard A. Epstein<sup>9</sup>

I have always been a small-government thinker. At the most general level, that position is captured in Aaron Director's maxim that the laissez-faire system starts from the assumption that government intervention is an evil until it is proved to be a good. As a general rule of thumb, this proposition is hard to beat. But as a guide to individual decisions, it does not tell you when or why that presumption should be overcome. One obvious area involves the commission of torts by one person against another. At least in the simple cases of trespass—the direct application of force by one person to the body or property of another—the presumption against legal intervention seems to be overcome. But it is important to understand just how far this kind of exception runs. It is easy to invent indirect-harm cases, as every legal system from Roman law to the present has done, in which a defendant is held responsible for setting hidden traps or supplying poison to someone else who in ignorance ingests it. It takes only a little more imagination for

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9. New York University School of Law, New York, NY 10012; Hoover Institution, Stanford University, Stanford, CA 94305; University of Chicago, Chicago, IL 60637.

the notion of a tort to cover the transfer of a good that contains a latent defect that manifests itself when the good is used in a normal and proper fashion and in its original condition.

It is thus possible to elaborate a theory of causation that covers a lot of the familiar cases. The one class of cases that resists easy incorporation into this basic pattern consists of those situations where the omission of a common precaution leads people to harm each other. This duty to take affirmative action is narrowly accepted in those cases where there is some independent duty to act, the two most common of which are status-based relationships, such as that between parent and child, and consensual arrangements, such as when a school or camp takes a child into its charge for daycare or an outing.

The far more difficult cases are those involving an asserted duty to rescue a stranger in need, often subject to the proviso that this duty arises only when the rescue can be easily accomplished. Yet we find that this expanded notion of responsibility—a duty to rescue strangers—has been stoutly resisted by common-law judges. Moreover, modern state legislatures are uniformly reluctant to impose such a duty by statute. Such reluctance is found even in cases of “easy rescue,” where one person, at no risk to himself, need only throw a line to a person drowning in the waters below a bridge. What explains the widespread reluctance to recognize the duty?

In an early article on the theory of strict liability, I challenged the utilitarianism that seemed to call for duty-to-rescue in these “easy cases.” At that time in my life I was, or at least thought I was, a libertarian who believed that an abiding respect for individual liberty was the explanation for the reluctance and that the liberty-based reluctance rested on ‘deontological’ reason—a word that I have come not to understand. I have thus come to regret a passage that I wrote in 1973 in which I played off a famous article by James Barr Ames (1908), who famously proposed the “easy rescue” duty. My 1973 passage follows:

Under Ames’ good Samaritan rule, a defendant in cases of affirmative acts would be required to take only those steps that can be done “with little or no inconvenience.” But if the distinction between causing harm and not preventing harm is to be disregarded, why should the difference in standards between the two cases survive the reform of the law? The only explanation is that the two situations are regarded at bottom as raising totally different issues, even for those who insist upon the immateriality of this distinction. Even those who argue, as Ames does, that the law is utilitarian must in the end find some special place for the claims of egoism which are an inseparable byproduct of the belief that individual autonomy—individual liberty—is a good in itself not explainable in terms of its purported social worth. It is one thing to allow people to act as they please in the belief that the “invisible hand” will provide

the happy congruence of the individual and the social good. Such a theory, however, at bottom must regard individual autonomy as but a means to some social end. It takes a great deal more to assert that men are entitled to act as they choose (within the limits of strict liability) even though it is certain that there will be cases where individual welfare will be in conflict with the social good. Only then is it clear that even freedom has its costs: costs revealed in the acceptance of the good Samaritan doctrine. (Epstein 1973, 198–199)

This passage rested on two premises. The first was that individual liberty, if it was to be taken seriously at all, must be a trump before which all utilitarian considerations fell. The second was that the utilitarian calculus, as reflected in a sound cost-benefit analysis, would indeed deem it socially desirable to impose a duty of rescue, at least if it could be confined to some narrow set of circumstances.

Today, I think that both of these premises are wrong. Instead, I would ground my rejection of Ames's rule in a kind of rule-utilitarianism. I do not believe that any narrow act-utilitarian theory works as a moral (much less a legal) theory: It is not easy to make interpersonal comparisons of utility, and it is extremely difficult to do so collectively. Individual actors may make private assessments of relative interpersonal utilities—such as when one makes a charitable gift—but such calculations are difficult to make or validate on a society-wide basis. Instead, the appropriate standard is a rule-based approach which asks, in the *ex ante* position, whether any reform made to the prior state of affairs constitutes a Pareto improvement, so that at least one person is left better off and no one is left worse off than before.

It is not clear that imposing an affirmative duty to rescue represents a Pareto improvement. The explanation requires a much closer look at the institutional and social arrangements around rescue. Imposing a duty of this sort may deter people from going to places where they think danger lurks. Even if the duty is only one of *non-risky* rescue, there remains the risk of the courts misidentifying non-riskiness! The best work on this issue is from David Hyman, who writes:

During the past decade, there have been an average of 1.6 documented cases of non-rescue each year in the entire United States. Every year, Americans perform at least 946 non-risky rescues and 243 risky rescues. Every year, at least sixty-five times as many Americans die while attempting to rescue someone else as die from a documented case of non-risky non-rescue. If a few isolated (and largely unverified and undocumented) cases of non-rescues have been deemed sufficient to justify legislative reform, one would think a total of approximately 1,200 documented cases of rescue every year should point rather decisively in the opposite direction. When it comes to the duty to rescue, leaving well enough alone is likely to be sufficient unto the day. (Hyman 2006, 712)

In other words, the larger social problem is risky rescue, not non-risky non-rescue. The issue requires institutional and not individual responses. For example, police and firefighters, trained for their jobs, keep crowds at a distance, lest they make any rescue efforts more difficult. So while there is good reason to believe that a generalized prohibition against the use of force and fraud does produce huge social improvements, once that baseline is established there is no reason to think that there is any social gain to be had from upsetting the standard rules on individual liberty in rescue cases.

But the way in which the problem is stated does not preclude the possibility that other deviations from the no-force-or-fraud baseline might help. At this point, the common suggestion is that the law provide a reward for individuals who engage successfully in rescues that they are not otherwise required to undertake. That rule, it turns out, has no application to casual rescues. No one ever claims the money; what usually happens is that the grateful rescuee sends some flowers or a gift certificate to the rescuer. But if the stakes are high, such as in the salvage of ships, now the incentives matter, and the standard practice is to award substantial sums for a successful rescue, often through an institutional tribunal like the Lloyds Insurance Company. Such institutional frameworks for recurring high-value rescue situations give more instructive rationales than does the general invocation of an abstract conception of liberty.

The liberty rationale is also dangerous for another reason. Everyone who is drawn to it accepts the notion that no one should be able to kill or maim another individual. In this context the liberty principle is so strong that it is hard to think of any good reason to overcome that presumption. But it is a very different thing when the notion of liberty is used as a barrier against taking or using someone else's property to avert imminent peril of life or limb. The suspension of absolute property rights to exclude in cases of private and public necessity has long been part of the common law. If possible, the party who avails himself of another's property should pay damages after the fact, but no one would allow a dock owner to demand an exorbitant docking fee from the captain of a sinking ship during a storm.

There are similarly tricky questions regarding the boundaries of liberty in the public sphere. Vexing problems include the imposition of taxes on income from labor or property, and the taking of private property for public use even when just compensation is provided. Working out the details of these rules is an arduous task, which I attempted to broach in my book *Takings* (Epstein 1985), which examines how complex the world turns out to be once these forced exchanges, whether for cash or kind, are allowed. There is no way to cabin this doctrine to simple cases in which the state takes land from one person to build a fort. Most critically, there are also frequent instances of government takings of lesser interests in land, including leases, mortgages, easements, covenants, air and mineral rights, from

large numbers of people, all of which have to be evaluated within the same intellectual framework. It is then necessary to sort all of these multiple types of takings into three groups. First, are those manifold takings that are blocked entirely, because they are not for a public use. Second there are those takings for permissible uses that are allowed only with just compensation. Third, there are those takings or regulations that may be done without compensation under the ‘police power’ to advance public health and safety, and to control monopoly behavior. These are multifaceted inquiries that the simple liberty framework cannot even address, let alone answer.

To be sure, this inquiry often requires empirical estimations, which in some cases are easy and in some cases difficult. It is tough to say whether third parties should be able to claim enforceable rights under contracts to which they are not parties, but stunningly easy to say that no two people by contract can impose affirmative duties on strangers. This framework can be used not only in a constitutional setting, but also to evaluate the various common-law rules for the creation of private property rights in different resources—land, water, minerals, air, spectrum, patents, copyrights and more. There is no way to go through the highways and byways here, but my methodological conversion to consequentialism was complete at the very latest with my article “The Utilitarian Foundations of Natural Law” (Epstein 1989).

Back in 1973 I did not see how such investigations would play out. Then, my chief interest was the theory of causation in the law of tort, usually a rather circumscribed inquiry. Perhaps, I am missing something today. But even if I were to adopt some new position on some issues, I don’t think that I could ever persuaded to go back to the simple liberty framework to which I appealed in dealing with the duty-to-rescue problem. That framework’s powerful claims of personhood against murder, rape, and theft remain rock-solid, because no one is ever permitted to invoke the notion that they labor under some private necessity in order to commit these heinous acts. That principle is applied only in those cases where one person needs to use (subject to an obligation of compensation after the fact) the property of another to escape imminent danger to life or property. Nothing in the consequentialist view displaces that presumption in favor of the protection of individual liberty in the core cases that give that principle its greatest attraction. And the consequentialist view is more systematic, and thus better able to explain a fuller range of simple and complex interactions, in ways that illuminate limitations as well as the usefulness of the liberty principle. I find that reckoning how the various threads fit together to my own satisfaction—much less anyone else’s—involves the work of a lifetime.

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# An Economist's Most Regrettable Statement

Sam Peltzman<sup>10</sup>

Sometime in the middle of 1988 I ventured to predict the outcome of the upcoming Presidential election. I cannot remember now whether this regrettable move was made in a working paper or some professional forum. Fortunately, as far as I recall, it never went further. I asserted confidently that Michael Dukakis would win handily over George H. W. Bush. Since Bush won with a popular vote margin of about eight percentage points and by over 300 electoral votes I could hardly have been more wrong. I exited the election prediction industry forthwith, and I have never returned, at least in professional guise.

At that time the election-prediction industry had more economists hanging around its edges than it does today. There was a flurry of interest among economists in quantifying the connection between economic conditions and electoral outcomes. I have some entries on this topic in this period (e.g., Peltzman 1987; 1990). Economists working in the area were busy presenting, discussing, and

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10. University of Chicago, Chicago, IL 60637.

regressing on questions such as: Which set of conditions mattered—those prevailing just before the election, or conditions over the whole political term? And which conditions—income, unemployment, inflation, etc.—mattered? Whose income or employment mattered—mine (the voter's) or thine (the country's)? I am not sure that a consensus ever emerged on these weighty questions, or on why we should ask them in the first place, but it was fun while it lasted.

Part of the fun was that you could plug a few numbers into the right-hand side of your favorite empirical model and generate predictions. That is the trap I fell into in mid-1988. I had some results that could generate predicted values for each state, and so generate them I did. They predicted an Electoral College romp for Dukakis. Well, as they say, you live and you learn.

I hope I learned something more than never to do it again. With hindsight the methodological stupidity seems obvious: Predicted values in our usage are conditional, not forecasts; they come with standard errors; and so forth. In this case the stuff that concerned us—the macro background—could only be decisive in close elections, and the standard errors were substantial enough to make any forecasting unwise. The work was sloppy. It involved much ad hoc fishing with little serious thought as to why we were fishing hither rather than yon. Certainly the issues that obsess us today—identification, omitted variables, and the like—were of little concern back then.

The larger lesson I would draw from the fiasco was one of humility. I like doing empirical work, and I have always tried to do it carefully. I think I enjoyed mashing the electoral data that went into my ill-fated prediction, and I don't think there was some obvious error either in data or procedure. But I no longer regard a single result, mine or anyone else's, with the kind of confidence that led me then to sally forth into embarrassment.

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# The Statements I Most Regret

Cass R. Sunstein<sup>11</sup>

I have said a lot of things that I regret. Here are the worst of the worst, beginning with the one that most makes me squirm:

1. “Radicals in Robes: Why Extreme Right-Wing Courts Are Wrong for America.”

That’s the title of my 2005 book on constitutional interpretation, and it’s a statement, all right. The great literary critic Wayne Booth explores the idea of an “implied author,” that is, the apparent character behind a written work, who may or may not resemble the real person. The implied author of *Radicals in Robes* is disrespectful and accusatory; he engages in plenty of name-calling. He is uncharitable to smart and good people. He wraps himself in the flag (“wrong for America”). He goes for the platitude. He’s not interesting. At times, he’s like a radio talk show host.

I don’t like that guy.

True, the book was written at a particular historical moment, when I feared that federal judges would read the Constitution as if it reflected the views of the conservative end of the Republican Party. That fear was hardly baseless, and under President Trump, it might turn out to be even more justified. I do not regret the substantive arguments in the book. But it makes too many debaters’ points, and the tone is all wrong, and so is much of the terminology—for example, using the word “fundamentalists” to describe those who believe in following the original meaning of the Constitution. Ugh.

2. “We ought to ban hunting, I suggest, if there isn’t a purpose other than sport and fun. That should be against the law. It’s time now.”

I said that orally, in a symposium at Harvard in 2007. The statement caused some serious trouble when the Senate considered my nomination to serve as Administrator of the Office of Information and Regulatory Affairs in 2009. It’s fair to say that the statement almost derailed my nomination.

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11. Harvard University, Cambridge, MA 02138.

But that's not why I regret it! Academics should not refrain from saying what they think because of the prospect of a difficult confirmation hearing. I regret the statement because I do not believe it. As I recall, my written remarks did not contain anything like that statement, and (I confess) the infectious enthusiasm and moral commitment of the very large crowd led me to endorse a position that, on reflection, I do not hold.

To be sure, there are strong moral objections to killing animals for sport and fun; I share those objections. But a legal ban on hunting would intrude on social practices that have long played a large role in American culture. True, traditions are hardly self-justifying, and it would be better if people preferred baseball, skeet shooting, and nature walks to hunting and killing live animals. But a legal ban, imposed by some kind of elite, would be a horrific fit with our nation's culture, and it would be disrespectful to the practices and commitments of millions of people (about 13.7 million, at last count).

3. "Marriage, as such, should be completely privatized."

That gem appears in chapter 15 of *Nudge* (2008), coauthored with Richard Thaler. The argument of the chapter is that the word "marriage" should not appear in any laws, and marriage licenses should "no longer be offered or recognized by any level of government." Sure, religious organizations could perform marriage ceremonies. But government would get out of the marriage business.

What a terrible idea. For countless people (including the present author, married in 2008, after chapter 15 was done), official marriage is important, even precious. It recognizes a status, and it does so in the distinctive way that comes from the state itself. Abolishing that status would impose a serious loss—and it might well have unintended bad consequences for spouses and children alike.

To be sure, Thaler and I were trying to solve a particular problem: the intense and seemingly intractable debate over same-sex marriage. We thought that privatization would be a way to make that debate disappear. We failed to foresee the immense power of the movement for same-sex marriage, which was able to achieve its goals in an extraordinarily short time. But even if that movement had turned out to fail, our proposal would throw away an indispensable institution.

4. "Cognitive infiltration."

In 2008, Adrian Vermeule and I published an essay in the *Journal of Political Philosophy*, "Conspiracy Theories: Causes and Cures." The essay deals mostly with why people believe (false) conspiracy theories; it explores the relevance of the availability heuristic, informational cascades, and group polarization. More briefly,

it discusses what government might do to correct (false) conspiracy theories. It emphasizes that the “first-line response to conspiracy theories is to maintain an open society.” But among other things, it suggests “a distinctive tactic for breaking up the hard core of extremists who supply conspiracy theories: cognitive infiltration of extremist groups, whereby government agents or their allies (acting either virtually or in real space, and either openly or anonymously) will undermine the crippled epistemology of believers by planting doubts about the theories and stylized facts that circulate within such groups, thereby introducing beneficial cognitive diversity.”

Vermeule and I note that we “assume a well-motivated government that aims to eliminate conspiracy theories, or draw their poison, if and only if social welfare is improved by doing so.” We also note, in passing (and without endorsing any particular proposal), that government has an array of possible responses to conspiracy theories, including bans and taxes. But we focus on (and do endorse) the idea of “cognitive infiltration,” and we spend several pages elaborating what that might entail.

I regret the term, because it is so readily susceptible to misinterpretation, and because it can be understood to conjure up the image of a new kind of Big Brother, using secret surveillance, and lies and tricks of various sorts, to undermine freedom of speech and association. Puzzlingly, and perhaps revealingly, not one of our many early readers objected to the term, or even flagged the possibility of misinterpretation, during the lengthy period in which the paper was circulating in draft and subject to comments (including peer review at the *Journal of Political Philosophy*). But when I was nominated to serve in the Executive Office of the President, a lot of alarm bells rang. Rereading the paper, I understand why.

I hasten to add that my own understanding of the proposal was quite narrow: We were speaking of how the U.S. government might disrupt recruitment efforts by terrorists who mean to kill Americans. (Vermeule, a wonderful friend and exceptional scholar, can of course speak for himself.) Nor was the proposal wild-eyed. From the public record, it appears that with respect to terrorists, the U.S. government is indeed working to use its own “agents or their allies (acting either virtually or in real space, and either openly or anonymously)” to “undermine the crippled epistemology of believers by planting doubts about the theories and stylized facts that circulate within such groups, thereby introducing beneficial cognitive diversity.”

In my view, there is nothing even a little bit wrong with that. But the narrowness of the proposal was not self-evident from the paper, and the term “cognitive infiltration” was a poor choice. It created a lot of misunderstanding and apparently widespread concern. (The fact that my job title was Administrator of the Office of Information and Regulatory Affairs was not helpful, because some

people thought that the word “information” suggested a propaganda function. In fact it refers mostly to the Paperwork Reduction Act.)

There is an interesting question about audience here. Red Auerbach, the great coach of the Boston Celtics, liked to say, “It’s not what you say; it’s what they hear.” If this particular paper had stayed in the academic domain—with readers of the *Journal of Political Philosophy*—there would be little or no cause for regret, because (I think) no one, or almost no one, would have taken it to be alarming. But academic articles always have some chance of receiving broader attention, and academics usually do best to avoid misunderstanding by general readers.

One last point: If an academic has said little or nothing that he regrets, there’s a real problem. A main job of academics is to float ideas and take risks, and if they do not make mistakes, or learn enough to change their minds, well, that’s really something to regret.

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## About the Authors



**Daniel Klein** is the editor of *Econ Journal Watch*, a professor of economics at George Mason University (where he leads a program in Adam Smith), the JIN Chair at the Mercatus Center at GMU, a fellow of the Ratio Institute in Stockholm, and the author of *Knowledge and Coordination: A Liberal Interpretation* (Oxford University Press, 2012). His email address is [dklein@gmu.edu](mailto:dklein@gmu.edu).



A sociologist, the Hon. **Monique Bégin**, PC, OC, FRSC, was one of the first three women from Québec elected to the House of Commons (Liberal, 1972), and re-elected in 1974, 1979, and 1980. She was appointed by Prime Minister P. E. Trudeau to Minister of National Revenue (1976–1977), then Minister of National Health and Welfare. An academic, Bégin was Dean of Health Sciences at University of Ottawa (1990–1997) and Professor in the Health Administration Program (1998–2010), a member of the International Commission on Population and Quality of Life (1993–1996) and of the WHO Commission on Social Determinants of Health (2005–2008). She is a Fellow of the Royal Society of Canada (1996) and Officer of the Order of Canada (1998); she has received 18 honorary doctorates. Her email address is [mbegin@uottawa.ca](mailto:mbegin@uottawa.ca).



**Michael J. Boskin** is the Tully M. Friedman Professor of Economics and Senior Fellow, Hoover Institution, Stanford University. He is also Research Associate, National Bureau of Economic Research. He served as Chairman of the President's Council of Economic Advisers from 1989 to 1993. He also helped design President Reagan's tax-rate reductions, indexing, accelerated depreciation, and IRAs and 401(k)s. He later chaired the blue-ribbon Commission on the Consumer Price Index, whose report has transformed the way government statistical agencies around the world measure inflation, GDP, and productivity. He authored three chapters in *Blueprint for America*, published by Hoover in 2016. His current research focuses on G-7 economic growth, the political economy of social security reform,

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and the response of taxes and transfers to distributional shocks. His email address is [boskin@stanford.edu](mailto:boskin@stanford.edu).



**Tyler Cowen** is the Holbert L. Harris Professor of Economics at George Mason University and Faculty Director of the Mercatus Center. He is the author of several books, including *Average Is Over: Powering America Beyond the Age of the Great Stagnation* (2013) and *The Complacent Class: The Self-Defeating Quest for the American Dream* (2017). His email address is [tcowen@gmu.edu](mailto:tcowen@gmu.edu).



**Jon Elster** (b. 1940) teaches political science at Columbia University. All his life he has been skating on thin ice, by venturing into issues and disciplines about which he knew little. Although in doing so he has made many mistakes, only the most important of which are reproduced here, he has been rescued by the generous willingness of those who know better to overlook them. His research has been organized around questions of individual and collective decisionmaking, including rational-choice theory, the theory of emotions, questions of distributive and of transitional justice, and constitution-making. He is currently engaged in a large-scale comparative analysis of the Federal Convention in 1787 and the first French constituent assembly in 1789–1791. His email address is [je70@columbia.edu](mailto:je70@columbia.edu).



**Richard A. Epstein** is the Laurence A. Tisch Professor of Law, New York University School of Law; the Peter and Kirsten Bedford Senior Fellow, the Hoover Institution; and the James Parker Hall Distinguished Service Professor of Law, Emeritus, and Senior Lecturer, the University of Chicago. His email address is [richard.epstein@nyu.edu](mailto:richard.epstein@nyu.edu).



**Sam Peltzman** is Ralph and Dorothy Keller Distinguished Service Professor Emeritus at the Booth School of Business, University of Chicago. He is an editor of the *Journal of Law and Economics*. Professor Peltzman's research has focused on issues related to the interface between the public sector and the private economy. His published work includes numerous articles in academic journals. His email address is samp@uchicago.edu.



**Cass Sunstein** is the Robert Walmsley University Professor at Harvard University. He is author of numerous books, including *#Republic: Divided Democracy in the Age of Social Media* (2017) and *Why Nudge?: The Politics of Libertarian Paternalism* (2014). From 2009 to 2012, he served as Administrator of the Office of Information and Regulatory Affairs. His email address is csunstei@law.harvard.edu.

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