Fiscal Illusion and Fiscal Obfuscation

Tax Perception in Sweden

TINO SANANDAJI AND BJÖRN WALLACE

Fiscal illusion refers to "the notion that systematic misperception of key fiscal parameters may significantly distort fiscal choices by the electorate" (Oates 1988, 65). The premise is that the tax system's design can lead to underestimation of the costs of public expenditure, with the public not being fully informed of taxation's total costs. Fiscal illusion is an example of a collective-action problem in public policy, where the benefits of individual voters' gathering and processing information are shared by many, but the costs are placed solely on the individual (Caplan 2001; Congleton 2001). In this article, we investigate the extent and nature of fiscal illusion in Sweden, drawing evidence from a nationwide survey of approximately one thousand randomly selected Swedish adults.

Sweden constitutes an unusually suitable testing ground of fiscal illusion. First, it has the highest tax rate as share of national income in the world, raising the question of how public support for high tax rates is maintained. Second, in Sweden most tax revenue is collected through indirect taxes rather than direct taxes, which increases the likelihood of fiscal illusion. Finally, the Swedish tax system is both flat and simple. There are few deductions, and taxes are collected on an individual rather than a household level.

Fiscal illusion consequently can be separated more easily from other systematic misperceptions of taxes and income.

Tino Sanandaji is a Ph.D. student in the Harris School of Public Policy at the University of Chicago; **Björn Wallace** is a Ph.D. student in the Department of Economics at the Stockholm School of Economics.

The Independent Review, v. 16, n. 2, Fall 2011, ISSN 1086–1653, Copyright © 2011, pp. 237–246.

Previous Research on Fiscal Illusion

John Stuart Mill ([1848] 1994) suggested that the burden of indirect taxes would be systematically underestimated. Italian economist Amilcare Puviani contributed to the field with more substantial work on fiscal illusion in 1903 (Baker 1983). Puviani argued that the ruling authorities attempt to create a "fiscal illusion"—an underestimation of the real tax burden among the taxed subjects—by means of various fiscal instruments. The notion of fiscal illusion was thereafter left largely unexplored until James Buchanan (1960) restored attention to this hypothesis. Developing Puviani's original intuition, Buchanan distinguished three main strategies that authorities attempting to take advantage of fiscal illusion would ideally employ in order to hide the collection of revenue. One is to use state-owned property to produce income, thus preventing the individualization of net opportunity costs. The second is to use indirect rather than direct taxation, which makes appreciation of the private part of consumption expenditures more difficult for the taxpayer-consumer. Finally, the authorities can raise revenue by means of inflation.

In contrast, the expenditure side of fiscal illusion has been used to reach the conclusion that the public sector is in fact too small. In particular, Anthony Downs (1961) considers the potential results of the complexity inherent in the tax system, where information costs cause rational individual voters to be ignorant of specific aspects of public spending. Downs argues that remote government benefits will tend to be less apparent than indirect taxation. As a result, a vote-maximizing government will keep public expenditures at a "suboptimally low" level as assessed against public preferences under perfect information. Similar arguments have been put forth by John Kenneth Galbraith (1958). Johan Fall and Anders Morin (2001), in contrast, find that the Swedish public overestimated the share of public spending that went to more popular core services, such as health care and schooling, compared to public programs with less measured popularity. The results suggest limited knowledge not only about the level of taxation, but also about the distribution of public spending, with people overestimating the share spent on the activities that the voters value the most.

Empirical work on determining the extent of tax illusion has attempted to link the size of the public sector with measures of fiscal complexity, based on the so-called revenue-complexity hypothesis, which maintains that voters underestimate taxes in fragmented tax systems. The first test of whether fiscal complexity influences the size of the public sector was undertaken by Richard Wagner (1976), who applied the Herfindahl index to empirical investigations of fiscal illusion. According to this index, perfect concentration (where all tax revenue comes from one source) corresponds to a value of unity, with higher dispersion of tax sources resulting in lower values. Hence, a fiscal system is conceived of as being more complex if its revenues derive from a greater number of tax sources. Wagner then regressed total public expenditures for fifty large U.S. cities on the Herfindahl index, controlling for a set of socioeconomic variables. He found that more dispersed tax sources were indeed associated with

higher spending—evidence in favor of the fiscal-complexity hypothesis. Following this study, a number of authors (Clotfelter 1976; Munley and Greene 1978; Pommerehne and Schneider 1978; Baker 1983) have attempted to replicate Wagner's findings, using more sophisticated techniques and other datasets, with varying degrees of success.[1]

Wallace Oates (1988) and Brian Dollery and Andrew Worthington (1996) survey the empirical results on fiscal illusion, finding mixed results. In a carefully designed recent experiment, Raj Chetty, Adam Looney, and Kory Kroft (2009) demonstrate that tax salience has economically significant behavioral implications, which indicates that tax visibility matters both for consumer choice and for public policy. (Other studies on fiscal perception include Dornstein 1987; Schokkaert 1988; Williamson and Wearing 1996; Gemmell, Morrissey, and Pinar 2002; Melo 2002; Chu 2003; Campbell 2004; Gemmell et al. 2004; and Sausgruber and Tyran 2005.)

The Swedish Tax System

In 2003, the year of our survey, taxes constituted 55 percent of Sweden's National Income,[2] the highest rate in the world (Organization for Economic Cooperation and Development 2010). In an international perspective, the Swedish tax system is set apart by its high levels of taxes, by its relatively high taxes on labor earnings compared to capital income, and by its low progressivity. As noted earlier, unlike the American tax system, the Swedish system is simple and straightforward: most people face the same tax rates, there are few deductions, and taxes depend on individual income rather than on household income. A similar survey in the United States would be more problematic because responses would hinge on the perception of the "typical" earner, on family status, and on various deductions and exemptions.

In our survey, we investigate people's perceptions of the *average* taxes on labor income paid by an *ordinary worker,* which we define as someone earning a median income. An ordinary worker in Sweden at the time of the survey faced largely three taxes, summarized in table 1.[3] The first is a payroll tax of 32.8 percent on nominal wages, paid entirely by the employer and never reported to the employee. Someone earning $30,000 in nominal wages in fact earns about $40,000, with $10,000 going

1. The fiscal-illusion hypothesis is tested on Swedish time-series data in Henrekson and Lybeck 1988 and Henrekson 1988, which find no significant effect.

2. In 2003, taxes in Sweden constituted 48 percent of gross domestic product. Tax revenue as a percentage of net national income, which excludes capital deprecation (generally not taxed), is a better approximation of the typical tax rate on individual income, our focus in this article.

3. Since 2003, the tax system in Sweden has become more complicated through the introduction of a large deduction for work earnings. Interestingly, there seem to have been issues of tax perception associated with this complex deduction in that half of the public was unaware of the invisible tax cut (Braunerhjelm and von Greiff 2008; Norgren and Antelius 2009).

Table 1
Taxes on Labor Income of Typical Earner, Sweden, 2003

Tax	Percentage of Income
Local government income tax	32.4
General contributions to pensions	1.8
Payroll taxes on employers	32.8
Average effective consumption taxes	22.0
Average total taxes for median earner consuming average basket	63.0

Note: The numbers given here are taken from Nordling 2003 and Nordling, Olsson, and Gull 2003. Local government tax refers to weighted average for all Swedish municipalities. The differences across municipalities are small, varying from 28.9 percent to 33.7 percent.

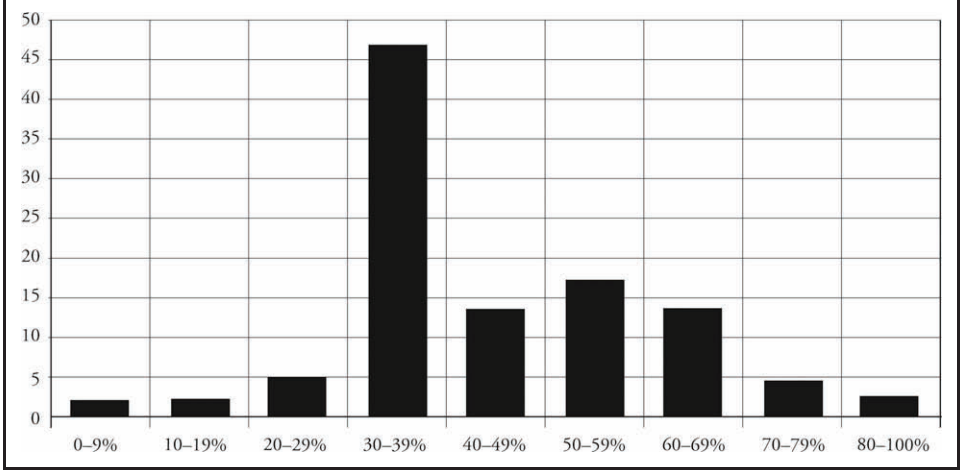
directly to the state. The second is a flat, visible income tax collected at the municipality level of on average 32.4 percent. Third, consumers pay value-added tax and other consumption taxes that amount to 22.0 percent of an average consumption basket (Nordling, Olsson, and Gull 2003). The median wage earner pays 63 percent of earned wages in total taxes. In contrast, the visible tax rate on nominal income is only 32 percent on average.[4] The average tax rate on labor earnings differs slightly from taxes as a share of national income, largely because taxes on capital income in Sweden are lower than taxes on labor earnings.

A potential source of bias in the survey is that the respondents may confuse average and marginal tax rates or may have a mistaken view of the typical worker's income. This effect should not be pronounced in Sweden, however, because the Swedish tax system is only mildly progressive. In 2003, the year studied, the difference between average income taxes paid by persons in the tenth and ninetieth income percentiles, respectively, were no more than four percentage points, 62 percent versus 66 percent (Nordling 2003).

Many public programs in Sweden are income/means tested, and some benefits depend on payments made. For this reason, a part of the payroll taxes accrues to the individual who paid for it, especially through the pension system. Most of the payments are not quantitatively linked to the individual payer (Du Rietz 2009). Means-tested programs and benefits based on previous payments complicate the calculations of tax rates for individual workers. Because in this article we have a public-choice perspective rather than a labor-supply perspective, we define taxes by legal status rather than through the individual budget set.

4. This number is obtained after some deductions and other smaller taxes are included in the calculation (Nordling, Olsson, and Gull 2003). Note that the value-added tax and consumption taxes in Sweden are baked into the price of the goods, unlike in the United States, where sales taxes are added to the price in the store and thus are more visible to the consumer.

Figure 1
Estimated Tax Rate for Ordinary Worker



The Survey

The study was conducted by the private polling institute TEMO during the spring of 2003 as part of a weekly phone survey that contains a multitude of questions. The sample comprised 1,009 randomly selected, nationally representative individuals.

Question 1: *Here are some questions about taxes. Let me start by asking approximately how many kronor you think that the state, county councils, and municipality in total collect in taxes for every one hundred kronor that an ordinary employee earns?*[5]

The responses show signs of considerable tax illusion among the Swedish people, who on average believe that an ordinary worker pays *40 percent* of his earnings in taxes. The total tax burden is thus underestimated by about *23 percentage points*, or by more than one-third. The median answer was even lower, at 35 percent. Only 8 percent of respondents had a correct estimate of the total tax level, and 6 percent overestimated the tax rate. The strong concentration (roughly half the respondents) of responses pointing to a tax burden of around 30–39 percent, illustrated in figure 1, suggests that many respondents were thinking only of the direct income taxes.

Question 2: *Here is a question about taxes. Let me ask approximately how many kronor you think that the state, county councils, and municipality in total collect in taxes for every one hundred kronor that you earn?*

5. The original questions were given in Swedish. In our translations, we have attempted to follow the original wording as closely as possible. At the time of the survey, 100 kronor equaled approximately U.S.$13.00.

Alan Lewis (1979) finds that individuals have a better understanding of their own tax rates and that they anchor their estimates of other peoples' tax rates on their own. For this reason, we also asked respondents reporting as employed about their own taxes. As we expected, given the Swedish tax system's construction, in which most workers earn similar income and face the same tax rate, the answers to question 2 are similar to those for question 1. The average estimated tax rate was *41 percent,* with a median of *36 percent,* which again confirms fiscal illusion.

Question 3: *Approximately how many kronor are paid as employer's fee for every one hundred kronor that an employee earns?*

The Swedish payroll tax is referred to as the "employer's fees" and constitutes the second-largest source of public revenue. Owing to its low visibility, it is one of the taxes for which the scope for fiscal illusion is the greatest. Although the responses varied substantially, the average answer was quite close to the actual level, both median and mean being at *30 percent*. There was no systematic bias: three-fifths of the respondents came within ten percentage points of the correct answer. Thus, the respondents showed no fiscal illusion with regard to the actual size of the payroll taxes.

Question 4: *Those who hire employees must pay an employer's fee for the wages paid to them. In your opinion, are such employer's fees . . .*

. . . *Primarily a tax on the employee?* (24 percent of the respondents)
. . . *Primarily a tax on the employer?* (56 percent of the respondents)
. . . *Do not know.* (16 percent of the respondents)

It is striking that fewer than one-quarter of the respondents were aware of the incidence of payroll taxes, especially because, on average, the public demonstrated an impressive knowledge of the size of the tax. Given the size of the payroll taxes, the misperception of the what they are exactly goes a long way in accounting for the underestimation of the total tax burden on labor income.

Although the employer has the formal responsibility to make the actual payment of the taxes, economic theory strongly suggests that this detail has no importance (see, for example, Atkinson and Stiglitz 1980). What matters is the tax incidence, which depends on demand-and-supply elasticities. The labor-supply elasticity for married men in Sweden has been estimated to be close to zero and that for married women probably slightly greater (Agell 1996). Owing to this relationship, labor will shoulder all or nearly all the burden of the payroll tax. This view has also received substantial empirical support (for Sweden, see Bohm and Lind 1988; Gruber 1997). The misperception on the tax incidence is especially telling, considering the labeling of the payroll tax as the "employer's fee." The term itself suggests that it is not a tax but a fee and not a burden on the employee but rather on the employer.

Question 5: *In your opinion, what is a reasonable total tax level for an ordinary employee working in Sweden?*

In the responses to this question, there is a strong concentration in the range from 20 percent to 40 percent, which contained 74 percent of all respondents. Both the mean and the median answer is *30 percent,* which implies that the respondents on average wanted to reduce the taxes paid by an ordinary worker by 10 percentage points (from 40 percent to 30 percent), even after accounting for the original underestimation of the aggregate tax. These results should be interpreted with caution. Lewis (1982) concludes that people typically support increased or maintained spending on public budget items related to health and welfare but simultaneously express dissatisfaction with the high level of taxes. In other words, they do not always make what is generally termed the *fiscal connection* between revenues and expenditures.

Fiscal Obfuscation

In much of the earlier empirical work on tax illusion, it was assumed that the source of misperception is the complexity that arises when taxes are spread over several sources of income, as implied by the "revenue-complexity hypothesis." This hypothesis maintains that the more varied sources of tax there are, the more difficult it is for taxpayers to know their total tax liability (see, for example, Gemmell, Morrissey, and Pinar 2002). The Herfindahl index, the most important empirical tool for measurement of tax illusion, is directly based on this assumption.

We would emphasize instead that tax illusion may also emanate from misperception of the incidence of taxation, even regarding taxes that are large. The voters may thus be well aware of both the existence and the size of a certain tax but simply not realize that they are the ones paying it. This view implies that taxes may be systematically underestimated even in a tax system with only a few taxes. Thus, the revenue-complexity hypothesis should be seen as a subcategory of tax illusion, with fiscal obfuscation as another possible form of tax illusion. Today *revenue-complexity hypothesis* and *tax illusion* are often used as interchangeable terms.

In fact, Puviani himself commented on this possible way of inducing fiscal illusion. Moreover, Buchanan states: "A final form of fiscal illusion involved on the levy of taxes comes about in the un-certainty concerning the actual incidence of the tax. Government will try not to levy taxes for which the incidence is known. The aim will rather be to induce as much uncertainty as possible thus keeping the individual in the dark concerning the actual amount of tax which he does pay in real terms" (1960, 62). This line of thought, somewhat puzzlingly, has been neglected in later empirical work on tax illusion. We find that only one-quarter of the respondents to our survey in Sweden identified the incidence of the second-largest source of government revenue, the payroll taxes. Even more interesting, this misperception appears to have been created intentionally, as indicated by the labeling of the tax as an "employer's fee," by its not being included on pay stubs, and by the use of language in which the term *income* almost always refers to nominal income as opposed to the actual income derived from labor earnings. Finally and most important, the mere fact

that the taxes on labor earnings are divided (quite evenly) between the direct income taxes and the payroll taxes may be taken as an indication that the incidence of the taxes is being deliberately hidden because there appears to be no efficiency reason for this division.

To describe a tax situation in which the incidence of income taxes is intentionally concealed, we use the term *fiscal obfuscation*. We borrowed the word *obfuscation* from development economics, where it refers to the deliberate hiding of the costs of rent-seeking redistributive policies by employing indirect means of wealth transfer (Magee, Brock, and Young 1989). Obfuscation relates to the politicians' exploitation of the public's rational ignorance by hiding information from them through indirect policies. The public perception of the Swedish payroll taxes seems to evince fiscal obfuscation that contributes to the tax illusion detected in this survey.

The implications of the misperception of incidence and the lack of knowledge of the size of taxes need not be the same. For example, the costs of informing people about the size of taxes may be greater if the underestimation arises from misperception of incidence. In this case, it is not sufficient simply to "point out" the taxes; more extensive education is necessary.

Conclusions

In a large survey of a representative sample of Swedes, we have established the presence of significant fiscal illusion among the Swedish general public. Our findings indicate that tax illusion may result not only from tax invisibility, as has often been assumed. An individual may well be aware of the existence and even the size of a particular tax yet fail to recognize the incidence of its burden, thereby underestimating the total individual tax burden. In our survey, respondents assessed well the size of payroll taxes, but a majority of them misplaced the tax burden. This misperception may not be entirely coincidental, but rather to some extent intentionally induced. Deliberate fiscal obfuscation may be suspected from the labeling of the payroll tax ("employer's fee"), which indicates that the employer bears the costs, and even more so from the tax system's mere design because there are no obvious efficiency reasons to account for the separation of the income and payroll taxes.

References

Agell, J. 1996. Why Sweden's Welfare State Needed Reform. *Economic Journal* 106: 1760–71.

Atkinson, A. B., and J. E. Stiglitz. 1980. *Lectures on Public Economics.* London: McGraw-Hill.

Baker, S. H. 1983. The Determination of Median Voter Tax Liability: An Empirical Test of the Fiscal Illusion Hypothesis. *Economic Journal* 11, no. 1: 95–108.

Bohm, Peter, and Hans Lind. 1988. Sysselsättningseffekter av sänkt arbetsgivaravgift i Norrbotten 1984–1986. Research Papers in Economics 1998:1 RS. Stockhom University, Institute of Economics.

Braunerhjelm, P., and C. von Greiff. 2008. Varannan svensk okunnig om jobbskatteavdraget. *Dagens Nyheter,* December 24.

Buchanan, J. M. 1960. *Fiscal Theory and Political Economy.* Chapel Hill: University of North Carolina Press.

Campbell, R. J. 2004. Leviathan and Fiscal Illusion in Overlapping Jurisdictions. *Public Choice* 120: 301–29.

Caplan, B. 2001. Rational Irrationality and the Microfoundations of Political Failure. *Public Choice* 107: 311–31.

Chetty, R., A. Looney, and K. Kroft. 2009. Salience and Taxation: Theory and Evidence. *American Economic Review* 99, no. 4: 1145–77.

Chu, H-Y. 2003. The Dual Illusion of Grants-in-Aid on Central and Local Expenditures. *Public Choice* 114, nos. 3–4: 349–59.

Clotfelter, Charles. 1976. Public Spending for Higher Education: An Empirical Test of Two Hypotheses. *Public Finance* 31, no. 2: 177–95.

Congleton, R. D. 2001. Rational Ignorance, Rational Voter Expectations, and Public Policy: A Discrete Informational Foundation for Fiscal Illusion. *Public Choice* 107, no. 1: 35–64.

Dollery, Brian, and Andrew Worthington. 1996. The Empirical Analysis of Fiscal Illusion. *Journal of Economic Surveys* 10, no. 3: 261–97.

Dornstein, M. 1987. Taxes: Attitudes and Perceptions and Their Social Bases. *Journal of Economic Psychology* 8, no. 1: 55–76.

Downs, A. 1961. Why the Government Budget Is Too Small in a Democracy. *World Politics* 12, no. 4: 541–63.

Du Rietz, G. 2009. *Selektiva sänkningar av arbetsgivaravgifterna*. Underlag till Globaliseringsrådets skattegrupp. Stockholm: Ministry of Education.

Fall, J., and A. Morin. 2001. *Vård, skola och omsorg—en gökunge i svensk ekonomi?* Stockholm: Industriförbundet.

Galbraith, J. K. 1958. *The Affluent Society.* London: Hamish and Hamilton.

Gemmell, Norman, Oliver Morrissey, and Abuzer Pinar. 2004. Tax Perceptions and Preferences over Tax Structure in the United Kingdom. *Economic Journal* 114, no. 493: 117–38.

Gemmell, N., O. Morrissey, and A. Pinar. 2002. Fiscal Illusion and Political Accountability: Theory and Evidence from Two Local Tax Regimes in Britain. *Public Choice* 110, nos. 3–4: 199–224.

Gruber, J. 1997. The Incidence of Payroll Taxation: Evidence for Chile. *Journal of Labor Economics* 15, nos. 2–3: S72–S101.

Henrekson, M. 1988. Swedish Government Growth: A Disequilibrium Analysis. In *Explaining the Growth of Government,* edited by J. A. Lybeck and M. Henrekson, 93–132. Amsterdam: North-Holland.

Henrekson, M., and J. A. Lybeck. 1986. Explaining the Growth of Government in Sweden: A Disequilibrium Approach. *Public Choice* 57, no. 3: 213–32.

Lewis, A. 1979. An Empirical Assessment of Tax Mentality. *Public Finance/Finances Publiques* 34: 245–57.

————. 1982. *The Psychology of Taxation*. Oxford, U.K.: Martin Robertson.

Magee, S., W. Brock, and L. Young. 1989. *Black Hole Tariffs and Endogenous Policy Theory*. New York: Cambridge University Press.

Melo, L. 2002. The Flypaper Effect under Different Institutional Contexts: The Columbian Case. *Public Choice* 111, nos. 3–4: 317–45.

Mill, J. S. [1848] 1994. *Principles of Political Economy*. Oxford, U.K.: Oxford University Press.

Munley, V. G., and K. V. Greene. 1978. Fiscal Illusion, the Nature of Public Goods, and Equation Specification. *Public Choice* 33, no. 1: 95–100.

Nordling, D. 2003. *Fakta för skattebetalaren förening 2003*. Stockholm: Skattebetalarnas Förening.

Nordling, D., H. Olsson, and J. Gull. 2003. *Så höga är skatterna 2003: En introduktion till skattesystemet i Sverige*. Utredningsrapport 2003:1. Stockholm: Skattebetalarnas Förening.

Norgren, C., and J. Antelius. 2009. *Jobbskatteavdraget*. Stockholm: Riksrevisionen.

Oates, W. E. 1988. On the Nature and Measurement of Fiscal Illusion: A Survey. In *Taxation and Fiscal Federalism: Essays in Honour of Russel Mathews,* edited by G. Brennan, S. Grewel, and P. Groenwegen, 65–82. Sydney: Australian National University Press.

Organization for Economic Cooperation and Development (OECD). 2010. *National Accounts of OECD Countries*. Paris: Organization for Economic Cooperation and Development.

Pommerehne, W. W., and F. Schneider. 1978. Fiscal Illusion, Political Institutions, and Local Public Spending. *Kyklos* 31, no. 3: 381–408.

Sausgruber, R., and J-R. Tyran. 2005. Testing the Mill Hypothesis of Fiscal Illusion. *Public Choice* 122, no. 1: 39–68.

Schokkaert, E. 1988. Fiscal Preferences and Fiscal Knowledge at the Local Level. *Journal of Economic Psychology* 9, no. 1: 29–46.

Wagner, R. E. 1976. Revenue Structure, Fiscal Illusion, and Budgetary Choice. *Public Choice* 25, no. 1: 45–61.

Williamson, M. R., and A. J. Wearing. 1996. Lay People's Cognitive Models of the Economy. *Journal of Economic Psychology* 17, no. 1: 2–38.

Acknowledgments: We gratefully acknowledge financial support from the Confederation of Swedish Enterprise and from the Jan Wallander and Tom Hedelius Research Foundation. We are also grateful for useful comments and suggestions from David Cesarini, Johan Fall, Magnus Henrekson, Örjan Sandewall, and Selva Baziki.

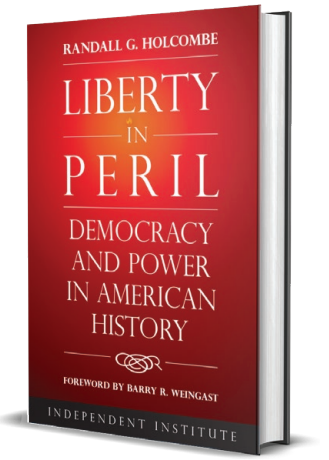
SUBSCRIBE NOW AND RECEIVE A FREE BOOK!



"***The Independent Review*** does not accept pronouncements of government officials nor the conventional wisdom at face value."
—**JOHN R. MACARTHUR**, Publisher, *Harper's*

"***The Independent Review*** is excellent."
—**GARY BECKER**, Nobel Laureate in Economic Sciences

Subscribe to ***The Independent Review*** and receive a free book of your choice such as ***Liberty in Peril: Democracy and Power in American History***, by Randall G. Holcombe.



Thought-provoking and educational, ***The Independent Review*** is blazing the way toward informed debate. This quarterly journal offers leading-edge insights on today's most critical issues in economics, healthcare, education, the environment, energy, defense, law, history, political science, philosophy, and sociology.

Student? Educator? Journalist? Business or civic leader? Engaged citizen? This journal is for YOU!

Order today for more *FREE* book options

SUBSCRIBE

The Independent Review is now available digitally on mobile devices and tablets via the Apple/Android App Stores and Magzter. Subscriptions and single issues start at $2.99. **Learn More.**



Download on the App Store | GET IT ON Google Play | Available on MAGZTER

INDEPENDENT INSTITUTE, 100 SWAN WAY, OAKLAND, CA 94621 • 1 (800) 927-8733 • ORDERS@INDEPENDENT.ORG