

Review Essay

**TAXPAYER COMPLIANCE: SETTING NEW
AGENDAS FOR RESEARCH**

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Jeffrey A. Roth, John T. Scholz, and Ann Dryden Witte (eds.), *Taxpayer Compliance: Vol. 1, An Agenda for Research*. Philadelphia: University of Pennsylvania Press, 1989. ("Panel Report")

Jeffrey A. Roth and John T. Scholz (eds.), *Taxpayer Compliance: Vol. 2, Social Science Perspectives*. Philadelphia: University of Pennsylvania Press, 1989.

Few areas of the law provoke as much comment and criticism as taxes, particularly around April 15. As the filing deadline approaches, taxes are a frequent topic of discussion at home and at work, and the entertainment and news media tend to focus on the fear and frustration felt by the public as they engage in the annual ritual of tax return filing. News headlines trumpet: "Too many deduction can bring on an audit," or "Criminal cases land 10 in jail." Popular television series such as *Roseanne*, *Murder, She Wrote*, and *Matlock* often include episodes with surly and sinister IRS agents who suggest that the characters involved will be the subject of an audit if they aren't careful.¹

Frustration over complexity is also frequently vented,² as in the comic strip by Cathy Guisewite where the main character,

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¹ In a 1975 survey Mason (1987) found that taxpayers often receive tax-related messages from the mass media that emphasize the fear of getting caught. This is no coincidence. IRS chooses cases to prosecute in part because of their publicity value and actively seeks to gain media attention on successful prosecutions, particularly around April 15, to enhance any deterrent effects. See also Mason, Calvin, and Faulkenberry 1975.

² Wiegand and Boyles (1988), reviewing archive tapes of news broadcasts from the three major networks for 1968–88, found that 13 percent of the tax related stories dealt with the issue of complexity. The incidence of such stories

Cathy, dials the IRS hotline and shouts “I want the home phone number of the lunatic who say it should only take 56 minutes to fill out my tax form!!!” Indeed, the current head of the Internal Revenue Service, Fred Goldberg, Jr., recently was pictured in a wire service story throwing up his hands in disgust under a headline which read: “Even IRS Commissioner Finds Tax Forms ‘Too Complicated.’”³

As these popular images reflect, the burden of taxpaying cannot easily be escaped. Tax laws touch and transform almost everyone’s life, often in profound ways. Few laws have as wide or deep an influence in day-to-day events, from impacting personal decisions to shaping economic phenomena, political forces, and the institutional fabric of a society. In short, taxes are of cardinal importance to an organized society and, thus, a strategic focus for examining the role of law in society.

The objective of this essay is to review the rapidly expanding body of research concerning taxpayer compliance. The first section discusses recent studies undertaken by government agencies and professional societies, and sketches some parameters of the U.S. federal income tax system. We then consider specific definitional and measurement issues encountered by compliance researchers. Lastly, we assess implications of these for interpreting past studies and framing new research agendas.

Tax Compliance as a Subject of Research

From the earliest days of organized government in ancient Mesopotamia, Egypt and China, tax laws have served as the essential ligaments of nations. “The revenue of the state is the state,” wrote Edmund Burke, the eighteenth-century statesman and historian. Put another way, without the legal authority to collect taxes and the compliance of citizenry to these laws, government is a sham. It is this fact—that taxes are profoundly essential to the existence of all successful states—that makes the age-old question of why people pay or fail to pay their taxes of central interest.

Trends in Taxpayer Compliance Research

While taxes have been imposed in many forms, tax compliance research in recent times has focused most pointedly on income taxes. In the United States, the Internal Revenue Service conducted one of the earliest large-scale investigations of income tax

was highest (40 percent) in mid-April and in years when there was a major change in tax laws and/or forms.

³ In an American Bar Foundation study of cartoons in the print media during the 1986 tax season, the most frequently conveyed images were of tax preparation being burdensome and even overwhelming and of the IRS as “mean and punitive.” The image of IRS as incompetent or inept, seen more recently, was not so apparent (Kinsey 1990; see also Aitken and Bonneville 1980:40; IRS 1987b).

compliance. The Audit Control Program of the Bureau of Internal Revenue (as the IRS was then called) of the late 1940s (Bureau of Internal Revenue undated, 1949, 1950; Farioletti 1952, 1958) and the IRS's current Taxpayer Compliance Measurement Program (TCMP) have collected detailed scientific data on the level and incidence of taxpayer noncompliance.⁴ Unfortunately, for many years these data were not generally available to outside researchers.⁵

More recently, access to IRS data has improved and the agency has seen the need to interact with outside researchers from a variety of disciplines. Since 1983, the IRS has convened annual research conferences on specific tax compliance topics and invited tax practitioners, academics, and tax officials to share their findings and views. These conferences have fostered multidisciplinary approaches to compliance research—combining theories and methods from law, sociology, psychology, economics, accounting, political science, criminology, statistics, marketing, management, anthropology, communications, and other disciplines.⁶

Congressional concerns about the “tax gap” have prompted the IRS to conduct a series of studies on the amount of tax not voluntarily paid (IRS 1979a, 1983, 1988, 1990b). These studies were, in turn, often critiqued by the General Accounting office (GAO 1988e, 1990a).⁷ Concern among members of Congress over taxpayer compliance resulted in the formation of one study task force (Dorgan 1987) and a number of special reports by the joint congressional committees and outside consultants (see, e.g., Simon and Witte 1980; O'Neill 1983; U.S. Joint Committee on Taxation 1983; Henry and Kastenber 1989). Most recently Daniel Rostenkowski, chairman of the House Ways and Means Committee, ordered a formal study of the problems which complexity poses for taxpayers

⁴ IRS has also commissioned a number of national opinion surveys over the years to examine taxpayer compliance (see, e.g., IRS 1968, 1986, 1987b; Aitken and Bonneville 1980; Yankelovich, Skelly, and White 1984). All references to Internal Revenue Service publications and documents are cited to “IRS” and year. Unpublished IRS reports and statistics are cited in text or notes.

⁵ TCMP data became publicly available for the first time in the mid-1970s as a result of extensive litigation under the Freedom of Information Act by one of the authors (*Long v. Internal Revenue Service* 1975). Aggregate as well as individual level TCMP data files (except those individual level data files used in discriminant function (DIF) development) were released along with all internal analyses, and reports. The TCMP paper records disclosed in this lawsuit alone ran over a million pages, in addition to the extensive computer tapes and microfiche files. Prior to this litigation, the IRS had generally withheld even aggregate TCMP statistics not only from the public but also from Congress and its investigative arm, the General Accounting Office (U.S. Congress 1972).

⁶ This multidisciplinary trend is particularly evident in recent papers by Webley et al. 1991; Alm 1991; Robben et al. 1990; Klepper and Nagin 1989b; Stalans, Smith, and Kinsey 1989; Dubin et al. 1990a, 1990b.

⁷ See also GAO 1988d; Long and Burnham 1990a. All references to General Accounting Office publications and documents are cited to “GAO” and year.

and held hearings in July 1991. At the state level, experiments using tax amnesties to induce delinquent taxpayers back onto the tax rolls and thereby increase tax revenues have been recently tried (see Alm, McKee, and Beck 1990; Alm 1991; Alm and Beck 1990, 1991; Kennedy 1990; Crane and Nourzad 1990a, 1990b; Fisher, Goddeeris, and Young 1989; Mikesell 1986). Tax professionals outside government also have been concerned about compliance issues. The American Bar Association Section of Taxation published two major reports during the 1980s. The first, edited by Sawicki and published in 1983, poses theories of compliance behaviors and provides anecdotal evidence of problems observed by practitioners. The second (American Bar Association Commission on Taxpayer Compliance 1987) contains the ABA recommendations for addressing compliance problems. Most recently (Madeo 1990) the tax sections of the American Bar Association and the American Institute of Certified Public Accountants (AICPA) co-sponsored an invitational conference on tax simplification and compliance.⁸

In 1989 a panel of the National Academy of Sciences (NAS) published findings and recommendations from a multidisciplinary study on tax compliance begun in 1984 (NAS 1984).⁹ This study, commissioned by the IRS, appeared as a two-volume work from the University of Pennsylvania Press (1989). The first volume, *Taxpayer Compliance: An Agenda for Research*, was edited by Jeffrey A. Roth, John T. Scholz, and Ann Dryden Witte. It contains the Panel's report and recommendations, along with two commissioned papers in an appendix on statistical and methodology issues. Eight additional commissioned papers were published in Volume 2.¹⁰ Because this two-volume work represents an important bench-

⁸ As noted at that conference, "A law that can be understood (if at all) only be a tiny priesthood of lawyers and accountants is subject to popular suspicion. By undermining popular support, complexity undermines the self-assessment on which economical compliance depends" (Bradford 1986).

⁹ The members of the Panel were Ann Dryden Witte, Department of Economics, Wellesley College, and National Bureau of Economic Research (chair); Eugene S. Bardach, Graduate School of Public Policy, University of California (Berkeley); Walter Blum, Law School, University of Chicago; Alfred Blumstein, School of Urban and Public Affairs, Carnegie-Mellon University; Sidney Davidson, Graduate School of Business, University of Chicago; Harvey Galper, Peat Marwick Main & Co.; Jerry R. Green, Department of Economics, Harvard University; Jan Kmenta, Department of Economics, University of Michigan; Jerome Kurtz, Paul, Weiss, Rifkind, Wharton and Garrison (and former Commissioner of Internal Revenue); Richard O. Lempert, School of Law, University of Michigan; David F. Linowes, Institute of Government and Public Affairs, School of Public Policy, University of Illinois; Stewart Macaulay, School of Law, University of Wisconsin; Richard E. Nisbett, Institute for Social Research, University of Michigan; John W. Payne, Fuqua School of Business, Duke University; Richard D. Schwartz, School of Law, Syracuse University; Barbara Yngvesson, School of Social Science, Hampshire College. Jeffrey A. Roth served as the Panel's study director, and John T. Scholz (Department of Political Science, State University of New York at Stony Brook) was the senior research associate for the Panel.

¹⁰ The ten commissioned papers are Boruch 1989; Carroll 1989a; Cialdini

mark in the development of this field, we will refer frequently to the NAS panel findings and recommendations (“Panel Report”).

The Panel Report is an important compendium of compliance research results, and should prove particularly useful to students and researchers just entering this field. The Report also outlines a number of priority research topics and recommends steps that should be taken in addressing future data needs. Unfortunately, as with most projects of this scope, the Panel Report was somewhat outdated by the time it was issued. Many recent findings were omitted or overlooked. Others have emerged since the Report went to press. Another problem is a somewhat naive interpretation or acceptance of the verity of government data. The Panel was afforded access to data that few outside the IRS have known. Yet it fails to fully explore the definitions and potential deficiencies inherent in these data. Finally, the Panel’s failure to follow its own definitions constrains its vision, undermining insights that could have been drawn from a nonevasion definition of tax noncompliance.

In the material that follows we attempt to update and to correct some of the shortcomings of the Panel Report. With our backgrounds as an applied statistician who has worked in the tax area and as an accounting professor with research interests in tax compliance, our review essay places somewhat more emphasis than others might on conceptualization and measurement issues we view as critical to progress in this area. Ultimately establishing research priorities is a matter of judgment on which, perhaps luckily, there are as many opinions as opinion makers.

Parameters of the Federal Income Tax System

Modern income tax laws are a quintessential example of complex laws enacted for a mass society. “No other branch of the law touches human activities at so many points.” *Dobson v. Commissioner* (1943). From the cradle to the grave various events and choices in our lives have tax consequences. Decisions concerning employment, marriage, child bearing, home purchases, gift giving, spending, or saving all affect our tax liabilities, while issues of taxation shape our economy, political landscape, and cultural institutions. Even in death we face the specter of estate taxes.

Unlike many other areas of the law that simply prohibit certain behaviors, modern income tax laws place affirmative duties upon all taxpayers to (1) file all required returns on a timely basis, (2) accurately report tax liability, and (3) pay all taxes when due. Yet the rules for performing these duties are often exceedingly complicated. For example, “[c]urrent law is so complex that IRS telephone assisters must ask as many as 42 questions to determine

1989; Kagan 1989; Kidder and McEwen 1989; Klepper and Nagin 1989; Schmidt 1989; Scholz 1989; Scotchmer 1989; Slemrod 1989.

whether a taxpayer qualifies as a head of household" (Crenshaw and Schatz 1990; see also Schenk 1990). When this confusing welter of rules for determining the answer to just one question on the tax form is multiplied by the many other complicated items on the return, the task of filling out one's annual tax return can be daunting for many.

The problem of assuring compliance with complex laws is magnified by the very wide coverage of federal income tax requirements. All persons receiving income above certain threshold limits¹¹ are required to file a return, regardless of their age, mental capacity, or reading ability. A majority of taxpayers turn to others for assistance with this task. About half of all individual returns are made out by paid preparers, while for 1040s—the long form used by most Americans—it is two-thirds (IRS 1989d). In addition, there are many sources of unpaid assistance, including family and friends, the IRS, and various outreach programs such as VITA and TCE (IRS 1990a). All together it is estimated (Arthur D. Little Opinion Research Corporation 1988) that individual federal income tax returns take over 5.4 billion hours annually to prepare—the equivalent of 2.7 million people working full time for a year, or commensurate to an army 25 times the number of IRS's current staffing.

Compliance is not assured simply by paying a tax professional to prepare the return or going to the IRS for assistance, even assuming one has compiled all necessary records. Disagreements between what taxpayers report on their returns and what IRS auditors recommend occur often whether or not the return was prepared by a tax professional.¹² Further, IRS telephone assisters provide incomplete or wrong advice one-fifth to one-third or more of the time, and a significant proportion of calls are not answered (GAO 1990b, 1989b, 1988c; see also Burnham 1990).

The administrative burden on the IRS is also enormous. Each year the agency processes about 200 million tax returns and more than a billion information documents (W-2s, 1099s, etc.) (IRS 1990a). These alone amount to nearly six tax documents a year for every man, woman, or child in the country. IRS (*ibid.*) also handles over 44 million taxpayer inquiries, plus an additional 30 million who receive assistance through IRS recorded message lines and various cooperative return preparation outreach programs. This administrative burden is increased by continual change in tax laws—twenty-eight new tax bills were enacted in the past twenty-

¹¹ For tax year 1991, filing thresholds range from \$2,150 of gross income for a married individual who files separately to \$11,300 for a married couple who are both 65 or older. In addition, children under 14 who are subject to the "kiddie tax" and families qualifying for the refundable earned income credit will have to file at even lower income levels.

¹² Unpublished tabulations from TCMP Phase III, Cycle 9, covering tax year 1979 individual income tax returns, available from the Center for Tax Studies/Transactional Records Access Clearinghouse, Syracuse University.

seven years (Gibbs 1988). During the past decade Congress modified over 2,381 sections of the tax code, forcing change in all IRS forms and instructions and the creation of eighty-one new forms (Crenshaw and Schatz 1990)—often at the last minute (LeBaube 1989).¹³

On top of this, the IRS also has to enforce the law against taxpayers who make errors in their returns or who do not voluntarily comply. Almost two-thirds of IRS's over \$5 billion budget is devoted to enforcement efforts. While tax audits remain a key enforcement tool, fewer than 1 million individual returns (0.9 percent) are now audited by IRS (1990a) each year. But computerization has allowed IRS to automatically screen all returns upon filing for obvious math and clerical errors, rank them for audit potential, and with computerized matching check third-party information documents to determine whether the taxpayer has omitted any of these sources of income. Such computer-aided enforcement tools result in over 20 million additional tax adjustment notices annually (*ibid.*).

Some tax errors are largely inadvertent. According to the most recent annual report, for example, IRS service centers discovered that taxpayers had made simple math or clerical errors on over 17 million federal income tax returns—or about one out of every six returns filed (*ibid.*; see also Swingen and Long 1988, 1989, 1990). Dollarwise, more of these errors result in the taxpayer paying too much than too little (IRS 1990b). Indeed, one of the most common errors in a recent filing season was for taxpayers to fail to subtract the standard deduction to which they were entitled before figuring out their tax (Gibbs 1988; IRS 1987b; Swingen and Long 1990).¹⁴ Detailed audits turned up another one out of every nine income tax returns filed by individuals that overreported tax liability—and for high-income nonbusiness returns almost one in four overreported (Long and Covell 1989).¹⁵

But, of course, not all misreporting is accidental or results in an overstatement rather than an understatement of tax liability. Taxes make up the single largest investment many individuals make in their lifetime. Thus, there are large financial incentives for an individual taxpayer to reduce this required tax payment, whether by fair means or foul. In fact, some feel that defrauding Uncle Sam has become a national pastime (see, e.g., Friedrich 1983; Smith 1991).

¹³ Congress sent the 1988 Tax Act to the President on 21 October and the 1989 act was delayed until 22 November. Tax forms that reflect these changes must be designed, printed, and distributed to taxpayers in time for the beginning of the filing season the following January.

¹⁴ Also from IRS unpublished statistics on math and clerical errors, 1988 filing season.

¹⁵ Unpublished tabulations from TCMP Phase III, Cycle 9, covering tax year 1985 individual income tax returns, available from the Center for Tax Studies/Transactional Records Access Clearinghouse, Syracuse University.

Unfortunately, no solid figures exist on the extent of tax evasion. Indeed, the problem of obtaining adequate measures of this key dependent variable in research on taxpayer compliance is a central challenge, one we will return to at more length later in this essay. One source of data is self-reports. When surveyed, upward of a quarter of adults indicate that they either failed to report all their income or have overstated their deductions (Kinsey 1984; Panel Report, pp. 54–58). Not all of this is necessarily tax evasion.¹⁶ On the other hand, many taxpayer who evade may not admit to it when asked by an interviewer.

A quite different picture of the nature and extent of tax evasion emerges from official statistics gathered by the IRS itself. The most detailed existing data on the extent of taxpayer noncompliance with federal income tax laws has been gathered by the Internal Revenue Service under TCMP, begun in 1962. Here, the IRS periodically selects a random statistical sample on which to take detailed compliance measurements about the accuracy of filed returns, the extent of individuals failing to file, and the characteristics of delinquent payers. In its latest study using detailed audits of returns filed by individuals, IRS examiners found misreporting on almost two-thirds (64 percent). However, they concluded that the taxpayer actually had been fraudulent in the filing of the return on only about 2 out of every 1,000 returns (see note 12a; Long 1980a, 1981a, 1990b; Long and Burnham 1990b). Even when data on nonfilers are added, estimates based on TCMP data on the extent of tax fraud still appear exceedingly low. Lower still are the actual odds that a taxpayer will be penalized for tax fraud—IRS slapped civil fraud penalties on only ten thousand returns, and aside from tax convictions related to narcotics and other illegal activities, only 1,414 taxpayers were convicted of tax crimes in 1989. Merely half of those sentenced served any prison time (see IRS 1990a). Thus, while IRS actually detects tens of millions of cases of tax misreporting, the vast majority are handled simply by an assessment of the unreported taxes plus accrued interest.

Estimates have also been developed for the amount of misreporting. For example, the latest IRS TCMP estimates (for 1985) in-

¹⁶ For example, not all “income” taxpayers receive needs to be reported on returns, since many forms of receipts are not taxable. (Latest estimates from IRS for the 1985 tax year are that more than 15 million returns were found to have overreported income by \$7.9 billion, including \$2.4 billion in nontaxable receipts reported as wages (see note 12; Long and Covell 1989). Taxpayers may also take deductions in good faith, only to discover later that they were not allowed, or not know (or inadvertently forget) that some minor amount of income should be reported, particularly if they did not receive a year-end reminder in the form of third-party information reports (but see Kagan 1989). Further, since self-reports usually require taxpayers to make a legal conclusion about their behavior and most taxpayers don’t understand all the legal distinctions between what is and is not allowable, or between taking advantage of legal loopholes and tax cheating, some self-reported infractions aren’t infractions at all.

dicating that returns filed by individual may understate their federal income taxes by over \$30 billion (see note 15; Fratantuono and Bucci 1989; but see Long and Burnham 1990a, 1990b). Other IRS estimates of the amount of taxes not voluntarily reported adjust these figures upward to as much as \$64 billion (for 1987) to account for underreporting that may not be detected through such audits and for taxpayers who fail to file a return at all (IRS 1990b).

Much less attention has been given to the area of corporate tax compliance, but all indications are that the picture is much the same (see, e.g., IRS 1989b:18; Rice 1990). Indeed, the latest TCMP national estimates covering corporations with assets of up to \$10 million indicate that there is very substantial tax underreporting—according to IRS auditors only 61 percent of taxes that should have been reported were in fact reflected on corporate returns filed during 1988.¹⁷

With this background in mind, we now turn to a more detailed consideration of the behaviors that make up taxpayer compliance and noncompliance.

DEFINING TAXPAYER COMPLIANCE

A fundamental threshold question is, What do we mean by taxpayer compliance? Or conversely, what constitutes taxpayer noncompliance? This is a particularly useful starting point. Past literature has not adequately grappled with a number of thorny issues in the conceptualization of tax noncompliance. Often authors assume their readers have an intuitive understanding of what tax compliance entails and fail to explicitly define the concept. Some scholars draw distinctions among different terms used to refer to tax noncompliance (such as tax cheating, evasion, errors, misreporting, etc.), while others seem to use these same terms almost interchangeably. These problems of clarity have been heightened by the fact that researchers approach the subject from many different disciplinary backgrounds and with a wide range of interests.

A useful starting point for discussion is the definition the NAS Panel (p. 21) adopted, although it restricted its attention to compliance with federal income tax reporting requirements:

Compliance with reporting requirements means that the taxpayer files all required tax returns at the proper time and that the returns accurately report tax liability in accordance with the Internal Revenue Code, regulations, and court decisions applicable at the time the return is filed.

When the taxpayer's return reports a tax liability less than the accurate amount, we use the term *underreporting*. Similarly, we use the term *overreporting* when the taxpayer reports a liability greater than required. Underre-

¹⁷ Unpublished IRS tabulations from TCMP Phase IV, Cycle 5, Corporation Returns Filed Survey, covering processing year 1988 relating to corporations with assets of up to \$10 million.

porting and overreporting are both forms of *noncompliance*, as the panel uses the term.”

This definition marks a major departure from ones previously used by tax administrators and many social scientists. Two central elements of this definition are pivotal: (1) what compliance means when requirements are ambiguous, and (2) whether motivation should be a defining factor for noncompliance behavior.

Ambiguous Tax Requirements

With some areas of the law, such as traffic laws setting speed limits, there is relatively little ambiguity in the definition of the behaviors proscribed. Unlike these, federal income tax laws are not necessarily clear-cut. There are wide areas of ambiguity where tax requirements remain uncertain and where reasonable people differ about what the law requires.

Ambiguity exists, often simultaneously, at three levels. First, there is ambiguity or uncertainty in the precise meaning of statutory language.¹⁸ Beyond this, another layer of uncertainty exists in determining how the law specifically applies to an individual fact situation. The tax code contains many examples of this “ambiguity in application”: When is a dependent not a dependent for tax purposes? Where is the line drawn between personal nondeductible expenses and deductible ones, or between the taxable and nontaxable portion of retirement benefits? When is an activity a hobby versus a part-time business, and what “ordinary and necessary” expenses may or may not be allocated to that business? In all of these cases the ‘facts’ may be clearly agreed on, but how the law applies to these facts may remain uncertain. Finally, a third layer of ambiguity may exist when evidentiary issues arise. Taxpayers usually bear the burden of proof to establish that the facts alleged are true. Except in a few areas, the law does not state precisely what evidence will be sufficient to establish necessary facts. Thus, it must be determined not only *how* the law applies to a individual fact situation but *what* the facts are. Uncertainty in what type(s) of evidence will be sufficient to establish these facts is “evidentiary ambiguity.”

When “fully informed neutral experts . . . disagree about how

¹⁸ Given the pace of new tax legislation in recent years, such legal complexity has become an acute problem. Often, Congress enacts a simple general rule and then directs Treasury to draft the detailed regulations to implement that rule. There is then a considerable delay before the issuance of temporary or proposed regulations. If there is any controversy, or even changes in the underlying economic or political environment, then final regulations are even further delayed. If regulations do not sufficiently clarify the law, the burden then falls on the courts. Again years can pass between enactment of a law and sufficient judicial interpretation is handed down to clarify the standard. The classic example of a delayed regulation are the debt vs. equity rules authorized under section 385 that are still not finalized after twenty years of proposals and debate. Many regulations mandated by the Tax Reform Act of 1986 are just now beginning to appear in proposed or temporary form.

the law should be applied," any interpretation of the law which has an arguable legal basis is "compliant" behavior even if the tax authorities disagree with this position, and the taxpayer's interpretation is later not upheld by the courts (Panel Report, p. 22). Accordingly, the Panel chose to include in its definition of noncompliance only those "favorable interpretations that are asserted by taxpayers *without a legal basis*" (ibid.; emphasis supplied).

This definition is consistent in thrust with the often quoted legal admonition of Judge Learned Hand:

Over and over again courts have said that there is nothing sinister in so arranging one's affairs as to keep taxes as low as possible. Everybody does so, rich or poor, and all do right, for nobody owes any public duty to pay more than the law demands: taxes are enforced extractions, not voluntary contributions. To demand more in the name of morals is mere cant. (*Commissioner v. Newman* 1947)

Not surprisingly, this conceptualization of noncompliance departs significantly from that traditionally used by tax administrators. There ambiguities are resolved in favor of the government; and any departures by taxpayers from these standards are viewed as "noncompliance."¹⁹ Economists and other social scientists often have adopted the government's view of noncompliance—particularly when relying on government-based measures of compliance (see, e.g., Dubin et al. 1987a; Witte and Woodbury 1985; Clotfelter 1983). Indeed, many have taken it one step further and treated noncompliance (for whatever reason) and tax evasion as nearly interchangeable.

But most tax professionals would agree that legal ambiguity is a very important source of disagreement between taxpayers and tax collectors over what constitutes the taxpayer's "correct" tax liability. Uncertainty in tax requirements or in their application to a particular situation is not limited to the wealthy or to those with especially involved financial affairs. For example, some particularly complicated provisions such as the earned income credit only apply to taxpayers with limited income. Further, results from Center for Tax Studies periodic surveys of tax professionals indicate that ambiguity is rated "a significant problem" for many common return line items, and that similar ratings are recorded whether taxpayers with low, middle, or high income are considered (Long and Swingen 1987).²⁰

¹⁹ Other theoretical models have been developed to determine whether increased uncertainty as a result of ambiguity can be used as an instrument for increasing "compliance" by, in part, causing some taxpayers to report more tax than they owe (see, e.g., in vol. 2, Scotchmer 1989; Slemrod 1989; also see White 1990; Beck, Davis, and Jung 1991; Beck and Jung 1989a 1989b). This framing of the issues is contrary to the Panel's compliance definition; if ambiguity increases overreporting errors and thereby generates increased government revenues, it does so at the cost of, not gain in, voluntary compliance.

²⁰ Unpublished tabulations for the Center for Tax Studies National Surveys of Tax Professionals, Syracuse University.

IRS internal statistics covering the past two decades reveal that the disagreement between the taxpayer and the IRS over the proper interpretation of tax requirements is the rule, not the exception, in audit cases. In fact, a *majority* of all dollar adjustments recommended by IRS auditors are contested by the taxpayer. Over the past decade, the proportion of IRS audit dollar adjustments contested has risen steadily and by 1988 was almost 80 percent (IRS 1989a). On these, the IRS estimates that for individuals only one quarter (26.8 percent) of the auditors' dollar findings are upheld and ultimately assessed (*ibid.*, pp. 30–31; see also GAO 1988a; see Long 1980a for similar data on the 1970s). Because the taxpayer, not the government, bears the burden of proof (and, typically, his or her own costs) when contesting an IRS auditor's findings, the proportion of audit recommendations not upheld on appeal are all the more striking (see Wright 1970).

But to the extent that the original dispute arose over the application of ambiguous provisions, the Panel's definition would exclude all such amounts from the definition of noncompliance—even the portion upheld against the taxpayer. In contrast, the government has tended to include all amounts, even portions not upheld, as noncompliance (for an explicit statement of this view, see GAO 1990a:7–8; see also IRS 1990b:13). While research on the effects of ambiguity is clearly an important focus for understanding the operation of our tax system (see Panel Report, pp. 22–23; McBarnet 1990), the Panel Report makes a significant contribution by emphasizing that such a focus is distinct from a study of tax noncompliance *per se*.

Unfortunately, after adopting this distinction at the beginning of the Report, the Panel does not adequately explore its many implications in framing or implementing a research strategy. It is almost as if the definitional section and those that follow were written by two different panels. Noncompliance in later sections of the report is used to refer to tax behaviors in situations where the law is ambiguous. Research findings from studies that employ noncompliance measures inconsistent with the Panel's definition are taken at face value, without regard to the potential biasing effects inclusion of ambiguous adjustments brings. Throughout the Panel Report, data based on IRS audit results that count any differences from the government's interpretation in ambiguous areas as noncompliance are used as if these correspond with the Panel's definition of noncompliance. Indeed, such indicators figure prominently as criterion measures in the recommended implementation of the Panel's priority research programs.

Yet the genius behind the Panel's fresh definition of noncompliance is nonetheless compelling, for it *can* reframe our thinking about tax noncompliance in some fundamental and very useful ways. Because the term noncompliance is—at its core—not a neu-

tral term, it subtly (and sometimes not so subtly) colors how we view issues in our work. Forcing *honest* disagreements to fit into an analytical framework that views them as a decision over “non-compliance” does fundamental violence to their nature and may produce answers with little validity for the real issues we seek to address. This can be counterproductive. For researchers, it can affect the priorities set for study, how such studies are implemented, and what are viewed as valid measures—points we will return to later in this essay. More fundamentally, it can tinge our view of how we think of ourselves as a people and as a nation, of what legislative priorities should be, and whether “get-tough” tax administration procedures should be our first line of defense rather than a balanced policy that includes generous assistance to taxpayers trying to cope with the system (Long and Burnham 1990a, 1990b). Henry (1983:23) has noted, “a key obstacle to progress . . . has been the lack of agreement about precisely what is being measured.” Depending on one’s definition of noncompliance, very different findings can emerge.

Should Motivation Be a Defining Element of Noncompliance?

A second pivotal issue is whether motivation should be a defining element of noncompliance. Most theories of tax compliance, as well as empirical work, have until recently been premised on the assumption that tax underreporting is intentional behavior (see, e.g., Allingham and Sandmo 1972; Cowell 1985; Kinsey 1985; Jackson and Milliron 1986; Hessing et al. 1988). Behavior that is unintentional has either been ignored or set aside in a footnote under the mistaken belief that it is too infrequent to matter and/or can be safely ignored as random noise (see, e.g., Clotfelter 1983; Witte and Woodbury 1985; Klepper and Nagin 1989a).

However, as noted earlier, the evidence is accumulating that unintentional noncompliance is neither small nor inconsequential. Nor is it necessarily random in nature. Initial work suggests that unintentional tax misreporting can be highly structured—first by the varying legal provisions in the code itself and, further, by the characteristics of taxpayers and their particular environments. For example, the more complex the tax provision, the higher the rate of misreporting too much as well as too little tax²¹ (Long and Swingen 1988a, 1988b; see also Milliron 1985). In panel data, taxpayers who by IRS standards misreport one year—irrespective of whether that error results in too much or too little tax—appear to have both increased odds of overreporting as well as underreporting in subsequent years. Some of this propensity seems to be related to the complexity of their tax situation, with higher income and business taxpayers more prone to report too much as well as too little

²¹ For sources, see notes 14 and 15.

tax (Long and Schwartz 1987).²² In contrast, low-income taxpayers who cannot afford paid assistance and who often have lower literacy rates have difficulty understanding other provisions, such as the earned income and child care provisions. For some, even routine math operations and reading the tax tables may present problems (Swingen and Long 1988, 1989, 1990; Park 1988; Christian and Gupta 1990). Not surprisingly, returns at all income levels made out by paid preparers have lower error rates when tax requirements are unambiguous (Klepper and Nagin 1987; Klepper, Mazur, and Nagin 1988).

The NAS Panel Report notes (p. 20): “[C]ompliance with reporting requirements requires a series of actions that may involve substantial effort, reading and computational skills, and judgment. For this reason, noncompliance may occur in a variety of ways and for a variety of reasons other than a deliberate decision to understate tax liability.” It then goes on to reject both behavioral and legal definitions of noncompliance that invoke assumptions about taxpayer motivation, finding it “more straightforward to adopt a compliance definition that minimizes the role of required assumptions and to define noncompliance as any departure from the standard, regardless of the explanation” (p. 21). This is a very useful definition of the *scope* of tax noncompliance. However, motivational and legal distinctions cannot be ignored when one seeks to explain the variety of behaviors that are typically grouped under this heading. As yet, no commonly agreed-on terminology or distinctions among subclasses of noncompliance behaviors have emerged. A variety of typologies have been put forward, but not all deal with the same range of noncompliance behaviors and none as yet have caught on (contrast, e.g., Kidder and McEwen’s (1989) work, which was commissioned by the Panel,²³ to Vogel (1974) fifteen years earlier).

The job of trying to meaningfully distinguish among types of tax noncompliance is a challenging one. At one legal extreme, there are the serious criminal offenses of tax evasion; at the other, are behaviors that are in violation of no law (e.g., overreporting errors). Below these simple legal categories, lie additional layers of complexity in the motivations and behavior giving rise to noncompliance. A simple example: in 1989, 2,242 taxpayers were convicted of federal tax crimes (IRS 1990a:Table 26). Not even a majority of these fit the popular stereotype of a tax evader. Half (1,138) were convicted under federal money laundering statutes, or for tax violations growing out of narcotics-related offenses. Here taxpayers

²² For sources, see note 15.

²³ Kidder and McEwen’s 1989 typology is organized around six themes: coercion, self-interest, habit, legitimacy, social pressures, and normative uncertainty. They argue that compliance and noncompliance cannot be understood as a unitary phenomenon, and for both theoretical as well as policy reasons, it is important to distinguish among these different types.

may fear that only by *inaccurately reporting* their illegal source receipts may they escape the undesired attention of the authorities. Or at the opposite extreme, 1 in 13 convicted in 1989 (of 171) were tax protestors. Such individuals, motivated largely by moral or political beliefs, typically seek to draw the attention of tax authorities to their evasion as an essential part of their acts of civil disobedience.

Given both the multiplicity of such tax behaviors and the many different questions compliance research seeks to address, it may well be that no single typology will prove adequate. The more central issue is the need to attend to these differences and to define more clearly the particular scope of compliance and noncompliance behaviors any one theory or proposition seeks to explain. Only in this way will cumulative, and therefore hopefully truly generalizable, knowledge accrue.

THEORY, MEASUREMENT, AND GENERALIZATIONS FROM PAST RESEARCH

The simultaneous broad scope of the behaviors encompassed within tax noncompliance—coupled with the absence of any recognized terminology to refer to its distinctly different forms—create problems for synthesizing both theories and research findings. The task is made even more difficult because available measures of noncompliance not only vary among themselves in the types of noncompliance they are likely to reflect but do not necessarily closely conform to the scope of behaviors that theoretical models of noncompliance have attempted to explain.

Theorizing about Tax Compliance

In addition to the Panel Report, a number of reviews of tax compliance research have appeared during the last decade (e.g., Witte and Woodbury 1983; Kinsey 1985; Jackson and Milliron 1986; Hessian et al. 1988; Cowell 1990). Staying current has become difficult because of the pace of new research, the many disciplines involved, and the wide variety of journals in which work now appears.²⁴ Synthesizing these also is hard since scholars have adopted many diverse frameworks. While tax compliance models are becoming increasingly sophisticated, no strong consensus or marked consolidation of ideas has emerged.

Despite the many disciplinary backgrounds and the variety of

²⁴ It is probable that the activities of the Panel during the five year between its appointment in 1984 and publication of its findings in 1989 helped accelerate these trends. The Panel commissioned a number of papers, many by scholars who had not previously turned their attention to this area. After their initial work for the Panel, many continued to work in this area, often adding new collaborators. The Panel was also instrumental in getting the IRS to augment the research funds at the National Science Foundation, so NSF—on a one-time basis—could fund more studies in the tax compliance area.

frameworks that characterize research in this field, much of the diversity of behaviors that makes up tax compliance (or noncompliance) has not been so evident in theoretical work. Most theoretical models until recently have framed issues at a fairly abstract level, incorporating little that was unique or specific to a tax context. Despite diversity in causal schema, as noted earlier, most prior work has viewed tax compliance as choice behavior, implicitly assuming noncompliance to be intentional (i.e., tax evasion). Empirical research has also largely restricted its focus to income taxes, to compliance by individuals not corporations, and to under-reporting rather than to delinquent filing or payment of taxes. While there has been considerable work that does not fit this mold, it has received less attention.

Illustrative of this emphasis is the Panel Report. Despite an introduction and definition of noncompliance emphasizing the variety of behaviors covered and the importance of inadvertent as well as intentional tax noncompliance, the focus of the body of the report is quite the reverse. Both the Panel's literature review and its suggested framework for future research focus almost exclusively on tax evasion as if it were synonymous with noncompliance.

The Panel uses a theme of incentives and disincentives—financial, legal, social and moral—in reviewing past literature. This general deterrence framework has been a subject of much of the economic literature, as well as some of the social and psychological studies (see also Klepper and Nagin 1989c).²⁵ Because the Panel finds (p. 149) compliance behavior only “loosely connected” to these incentives and disincentives, it expands this framework to consider how (pp. 149–50) taxpayers’ “understandings and values . . . about the federal income tax system” (tax schemas) develop and then influence tax behaviors. Its review draws on a number of papers that the Panel commissioned, particularly Carroll (1989a) and Cialdini (1989). Discussion is organized on the sources from which taxpayers acquire tax schemas (occupational or workplace networks, other social/friendship networks, and tax practitioners)

²⁵ The earliest theoretical work applying the deterrence model to tax evasion is generally credited to Allingham and Sandmo (1972). But a dissertation by Norsworthy (1966) applying principles of utility maximization to modeling tax evasion and enforcement response appears to predate even Becker's 1968 seminal piece on illegal activities more generally. IRS conducted some of the early studies of the impact of tax audits on taxpayer compliance (see, e.g., IRS 1970, 1973, 1975); this was followed by academic studies using self-report data in the 1970s (for a review of this early work see Kinsey 1985) and then by laboratory experiments (see Friedland, Maital, and Rutenberg 1978; but also see Spicer and Becker 1980) and deterrence studies using IRS compliance measures (see Long 1980b; Witte and Woodbury 1985; see also Clotfelter 1983). A number of early works, as well as more recent studies (Bardach 1989; Carroll 1989b; Cialdini 1989; Hanno and Violette 1990; Harvey and McCrohan 1988 1990; Hite and McGill 1990; Jackson and Jaouen 1989; McGraw and Scholz, 1991; Smith and Stalans 1990), deal with nonmonetary incentives such as appeals to conscience.

and on taxpayer decision processes. Notably missing is consideration of the roles of the IRS itself and the mass media in influencing the development of taxpayers' tax schemas.²⁶ The Panel introduces a potentially useful idea of "tax careers," a concept familiar from other contexts in studying criminal careers (although this connection is not explicitly made by the Panel). This concept stresses how particular circumstances cause a taxpayer to become noncompliant (or compliant) and what influences this behavior to persist (or desist) over time.

Throughout, the Panel's concentration is on taxpayers' *will- ingness* rather than *ability* to comply. Other topics such as the compliance burden are only briefly alluded to (see p. 118), and only in the narrow context of the disincentive of compliance costs²⁷ (see also pp. 147–48). Thus, work on compliance burdens, the impact of change and complexity of tax requirements, the availability and adequacy of IRS taxpayer education and assistance, and other factors affecting taxpayers' ability to comply receive little or no attention.²⁸

This tunnel vision artificially constrains not simply which research is examined but also how the Panel has framed underlying issues. Sometimes, a very misleading picture results. No where is this more evident than in the Panel's treatment of the role of tax professionals. Without offering any evidence to support its speculation, the Panel Report's tone in describing its role presumes tax practitioners condone—even assist—tax cheating. Indeed, in describing three services or functions tax professionals provide, the Panel defines "the third function of tax practitioners" as one of giving "risk advice . . . on such matters as what reports are least likely to be challenged, what types of income are least likely to be

²⁶ See, e.g., Stalans et al. 1991; GAO 1990b, 1990c. While ignoring the influence of mass media and IRS contacts in its conceptual framework, the Panel somewhat inconsistently focuses on precisely these in one recommended research strategy (see pp. 197–206).

²⁷ There is also an apparent assumption by the Panel that for (p. 145) "taxpayers with relatively simple tax situations (e.g., all wages and salaries subject to withholding, all assets in a savings account on which a bank reports interest to the IRS, standard rather than itemized deductions)," full compliance is not much of a problem. The Panel is correct that a sizable proportion of all taxpayers fall into these classes. However, the latest IRS TCMP estimates are that if every return in the country were audited, their examiners would recommend adjustments for about four out of every ten of such "simple" (1040A type returns with incomes less \$25,000) returns—tax adjustments which averaged \$211 (see note 15). Such recommendations do not necessary all constitute noncompliance under the Panel's definition, since some may involve ambiguous requirements, but the frequency and magnitude of the IRS recommended adjustments does make one wonder whether there are many really "simple" returns.

²⁸ See, e.g., Barker 1966; Sandford 1973; Gustafson 1979; Westat, Inc. 1980; Long 1980a 1981b; Slemrod and Sorum 1984; Milliron 1985; American Bar Association Commission on Taxpayer Compliance 1987; Gibbs 1988; Mason 1988; Long and Swingen 1988a, 1988b, 1989; Park 1988; Redish 1988; Swingen and Long 1988; Pecarich and Schwarz 1989; Slemrod 1989; Alm 1990.

found in audits, or what dollar amounts are likely to be ignored by the IRS" (p. 172).

Tax practitioners do have an obligation to inform a taxpayer when there are ambiguous areas of the code and the practitioner's interpretation, despite its legal basis, might be challenged by the IRS. But advising taxpayers on how to choose areas in which to evade that minimize chances of being caught is not one of the functions of tax practitioners. Such behavior would be totally unacceptable under existing professional standards of conduct,²⁹ as well as under the rules (U.S. Treasury Department 1985) governing tax practice before the IRS.

The Report's treatment of the influence of tax practitioners on taxpayers' schemas and compliance behaviors also betrays the Panel's uncertain commitment to its definition of compliance. Contrary to the Panel's delineation of ambiguous requirements as "compliance" when some legal basis exists, the tax practitioner's legitimate role of advising on ambiguous areas of the law is treated as a major cause of noncompliance. For example (p. 172), the Report asserts that "even though the interpretation was made in good faith . . . , tax advice may lead to noncompliance through disagreements between the adviser and the tax administrator over interpretations of complex regulations" and cites in support (p. 173) government statistics that treat differences of opinion over ambiguous items as noncompliance (similarly, see pp. 174–75, but also see p. 177). Further, because of the Panel's focus here on intentional rather than unintentional behavior, the Report ignores tax practitioners' positive impact on compliance through educating taxpayers about tax requirements and helping ensure the accuracy of tax returns (see IRS 1987a; Klepper and Nagin 1987; Klepper et al. 1988; Collins, Milliron, and Toy 1988; Jackson and Milliron 1989; Swingen and Long 1990; Tomasic and Pentony 1990).

Whatever limitations in coverage,³⁰ the Panel's review of the literature in chapters 2 and 3 of its Report, plus a forty-two-page

²⁹ E.g., the *Statement on Responsibilities in Tax Practice* of the American Institute of Certified Public Accountants (1988) provides that "a CPA should not recommend . . . a position be taken . . . unless the CPA has a good faith belief that the position has a realistic possibility of being sustained administratively or judicially on its merits if challenged"; nor should a CPA "prepare or sign a return" that does not abide by these standards. In addition, the statement explicitly censures "recommend[ing] a tax return position that . . . [e]xploits the Internal Revenue Service audit selection process; or [s]erves as a mere 'arguing' position advanced solely to obtain leverage in the bargaining process of settlement negotiations with the Internal Revenue Service."

³⁰ Despite a lengthy bibliography, coverage is incomplete even of studies that were published up through 1987 (the goal the Panel had set; see pp. 19–20), and references are marred by many inaccuracies. Laboratory tax evasion experiments receive little attention, although this is somewhat understandable since a number of these are only now appearing in published form. See, e.g., Webley et al. 1991; Alm 1991; Beck et al. 1991; Collins and Plumlee 1991; Robben 1991; Robben et al. 1990; Alm et al. 1990. A reader may also find the review's organization somewhat repetitive.

bibliography, makes a valuable contribution particularly by its inclusion of many internal IRS studies plus others done for the agency by outside contractors that deserve to be more widely known. While the Panel's attention was on U.S. federal income tax compliance, there is an expanding body of research on tax compliance in other countries that the Panel might have benefited from more fully considering (see Panel Report, pp. 19–20). Recent examples from literature published outside the United States illustrate the strong benefits such a cross-cultural perspective can provide (Robben et al. 1990; Webley et al. 1991).

While the Panel notes many promising ideas and areas for future research, it reaches a rather pessimistic conclusion on the extent of current knowledge. “[A]lthough researchers have found many correlations between taxpayer compliance and other variables, they have developed very few hard facts” (p. 138). While we are sympathetic with the Panel's assessment (although a bit too harsh), we differ with the Panel on why, despite the volume of recent research, so little definitive can be said.

Part of the apparent conflict in findings—which the Panel Report reinforces rather than corrects—arises from a failure to distinguish among results that primarily apply to tax evasion versus other forms of noncompliance. Unless one believes that the same causal structures account equally well for all types of noncompliance, differences in outcomes should be expected depending on the composition of behaviors studied.

A second important barrier is the quality of available data on tax compliance and the lack of agreement between indices developed using different measurement methods. It is to these issues that we now turn.

Measuring Noncompliance

Richard Lempert (1990) summed up the feeling of many when he recently observed that the quality of tax compliance data available is inadequate. He noted that available data simply do not allow researchers to answer the increasingly sophisticated questions compliance theories are designed to address. We agree and would argue that measuring compliance is currently the single most difficult challenge researchers in our field face. First are the obvious twin concerns of the reliability and validity of these measures. Second is the problem of “coverage,” and in particular of matching the scope of compliance behaviors relevant to our theoretical models with the types of noncompliance assessed by our measures.

The 1989 Panel Report (pp. 12–13, chs. 5–6) also recognizes the importance of measurement issues and devotes almost half its space to recommendations on data needs, particularly data quality, availability, and accessibility.³¹ But its vision is rather limited. The

³¹ The Panel recommends providing improved access to data sources and

Report makes little attempt to match the Panel's definition of noncompliance with available measures or to assess their validity in light of these differences. The Panel ignores the lack of fit between current measures and the scope of behaviors many theories address. As to issues of data reliability, the Panel Report takes a surprisingly uncritical view of adequacy of indices based on official government sources. Government return or audit-based measures are consistently treated as the unquestioned criterion (see pp. 7, 222, 228) against which other measures should be judged. At the same time the Panel shows a strong disinclination to believe results from any study based on self-reports, unless it is first confirmed by use of IRS-based measures. For example (pp. 7–8): "However, because survey data reflect what respondents tell interviewers rather than actual compliance, they are not sufficient to establish this proposition. Individual-level data . . . are needed [using] . . . measures of compliance constructed from tax returns or audit results."³²

Yet more than a decade ago, an earlier NAS panel on *Surveying Crime* (Penick and Owens 1976:154) noted: "official statistics are necessarily an imperfect measure. This is so because they are the outcome of a complex series of social and organizational processes, varying over time and place, each one of which almost certainly introduces substantial systematic biases into the statistics."

increased support levels. Other implementing recommendations of a more controversial nature include subjecting IRS internal research to institutional review to protect human subjects (pp. 241–45), setting up "an independent repository" or "independent data center" located outside IRS to carry out analyses for researchers on "sensitive IRS data," and linking IRS taxpayer records with survey and other information sources (pp. 235, 240–41). Its recommendation to set up a "Compliance Research Advisory Group" within IRS (see pp. 209–10, 235, 256, 260–62) has been implemented, although with a more limited role as a gatekeeper on data/research issues than the Panel envisioned. A series of proposals for setting IRS disclosure standards (see pp. 236–41) were flawed by the Panel's lack of knowledge and misinformation on current IRS disclosure practices and its unfamiliarity with existing federal public access statutes. In fact, rather than promoting research access to IRS data, some of the Panel's suggestions (see pp. 238–40, 258) regarding the desirability of permitting IRS to withhold records the agency considers "too sensitive to be released" would clearly contravene existing public access laws (for example, 5 U.S.C. 552). Contrary to the Panel's understanding (see pp. 236, 210, 245 n.1), IRS has made public individual-level files from entire TCMP surveys (involving TCMP Phase II). It has also publicly released (after deletion of personal identifiers) a variety of other individual-level data from tax returns and from master file records of IRS administrative actions, from other data systems on criminal investigations and prosecutions, and on administratively appealed audits. Case records on every federal prosecution of tax offenses, including referrals declined by the Justice Department, are similarly publicly available.

³² The Panel discusses potential limitations of self-report measures at some length (see pp. 220–27), but no similar discussion occurs for government return or audit-based measures. It also "recommend[s] a research program to improve the validity and specificity of survey-based [self-report] measures of compliance and noncompliance" (p. 222) but fails to recognize any need for a similar effort for these government measures.

We agree with Kinsey (1988:2) that “research tends to treat tax noncompliance as if it were a *behavior*, when it is actually a *social judgment*”:

The designation of any individual behavior as “illegal,” then, occurs through a cognitive process of matching the perceived facts of an event with the judge’s understanding of legal requirements. Individuals can develop different judgments of the same event because they have different working theories of the law, because they are selecting and attending to different information, and/or because they have different decision rules for matching the two. The basic point is that noncompliance exists at the intersection of perceived facts and perceived law; it inescapably involves interpretations.

As a result of these implicit interpretations, different measurement approaches to tax compliance can produce quite different results. Five different methods have been employed to measure tax compliance at the level of the *individual* actor.³³ Three of these are most commonly used: direct observation, tax audits, and self-reports. The remaining two approaches which rely on indirect methods—changes in return characteristics and prediction (DIF) indices—are seen less often.

Direct Observation

The first method, direct observation, was not directly considered in the Panel Report, although it is the technique used in most laboratory tax evasion experiments (for reviews, see Webley et al. 1991; Alm 1991). It works here because the experimenter knows, and often controls, the subject’s true tax liability which then can be compared with what the subject reports. With this method motivation cannot be directly observed, but only inferred,³⁴ and what is observed is limited by the “realism” (Webley et al. 1991) presented in the experimental setting.

However, direct observation as a measurement method is not limited to experimental contexts since it can be used whenever the relevant behaviors can be “observed.” But it helps if there is consensus, in Kinsey’s terms, over both the facts and the legal requirements (e.g., there is no dispute over the legal significance of the transactions that took place). While these conditions restrict

³³ A larger array of both direct and indirect methods has been used to estimate the *aggregate* size of federal income tax misreporting and its change over time. But research seeking to explain the behavior of individual taxpayers—whether these be individuals, corporations, exempt organizations, or other institutional actors—is better served by measures at the micro level where an individual behavior can be related to the specific characteristics of the act, the individual actor, and the legal, social, economic, and administrative context in which this behavior took place.

³⁴ Even in a laboratory experiment, a substantial number of inadvertent reporting errors can arise when realism in the reporting task is introduced; see, e.g., Robben et al. 1990.

the applicability of this method, there are still a number of areas where this approach could be more widely used. For example, most math and clerical errors detected at IRS service centers at the time the return is filed (Swingen and Long 1988), delinquent tax payments or forms (Long 1980a; Friedman 1990), and computerized matching of different source files, such as tax returns and third party reports, or matching IRS, Social Security, and Census files (see Long 1980a:83–86; GAO 1979a), provide information whose potential deserves to be better exploited by outside researchers. Even where direct observation is not wholly dispositive, it can still identify important compliance issues.³⁵ Thus, after social security numbers were required for children aged 5 and older in the 1986 Tax Reform Act,³⁶ the number of dependents claimed on the following year's tax returns fell dramatically by 7 million, raising the interesting question: "Where did all the dependents go?" (Szilagyi 1989, 1990).

Audit-based Measures

More often noncompliance behavior is not directly observable. Thus, the second approach seeks to uncover tax noncompliance through an audit or investigation. However thorough the audit, some misreporting will not be detected by this method, and the extent of underdetection may vary depending on the type of tax behavior and procedures used. Because consensus on the facts or legal requirements (or both) often does not exist, the perspective of the auditor has a critical impact on what gets recorded as noncompliance. While in theory "unbiased" judges could (and should) be employed, in practice available measures have relied on government tax audits. But because taxpayers who are singled out for regular audits do not tend to be representative even of noncompliant taxpayers, findings based on analyses of traditional enforcement data are usually not generalizable. (For different views see Dubin et al. 1987a, 1987b, 1990b; Crane and Nourzad 1990b.) Thus, to avoid this selectively bias, most audit-based measures use investigations of random samples of taxpayers.

This "random investigation" method (Long 1980a:53) is the approach taken by the IRS (1989b) in the TCMP and its predecessors dating back to the Audit Control Program of the late 1940s (Bureau of Internal Revenue undated, 1949, 1950). For example, to determine the accuracy of reporting on returns, IRS periodically selects a stratified random sample of returns (individual or corporate income tax, partnership, exempt organization, fiduciary, estate, employee plans) and gives each a detailed tax audit, recording

³⁵ The demarcation between direct measures based on clearly observable behavior vs. indirect measures of noncompliance is not clear-cut, since ultimately all are inferences based on social judgments.

³⁶ The age was later lowered to 2 by the Family Support Act of 1988.

line by line the items and amounts originally reported and what the IRS auditor determines should have been reported. Any penalties IRS assigns are also noted. While the probability samples selected for TCMP studies of nonfilers and delinquent payers are necessarily drawn somewhat differently, the basic approach used by TCMP to measure compliance in these areas is similar. Because of improved accessibility to outside researchers, TCMP data are now coming into increasing use.³⁷

Unfortunately academics have primarily used TCMP to test models of tax evasion—a purpose for which it is largely unsuited. TCMP estimates of the extent of evasion—on the order of only two per thousand returns—are grossly low and yield (even in a national TCMP sample of 50,000) few alleged evaders to analyze (Long 1980a, 1981a, 1990a; see also note 15). Yet simply treating all TCMP measured noncompliance as evasion is not a workable solution, since these figures are dominated by behaviors having little to do with any evasion motive. Often whether the behavior is noncompliant at all is in dispute.³⁸ In fact, given the complexity and ambiguity inherent in tax requirements along with the nature of government audits, IRS audit-based measures to a large extent are as much a reflection of government behavior, knowledge, and attitudes as they are of the taxpayers they are designed to assess.

We know of one study that has tried to appraise the reliability and validity of audit-based noncompliance measures. This recent pioneering study (Elffers, Robben, and Hessing 1989, 1991; Elffers 1991) compared recommended audit adjustments in a sample of returns³⁹ examined by two independent tax inspectors in the Netherlands, plus a third 'expert' inspector team. Gross differences in auditor recommendations were found. For example, while the first and second auditors found a similar proportion of returns needing adjustments, these adjustments applied in large part to

³⁷ See note 5. Now many aggregated as well as some individual-level TCMP data files are publicly available as documented SAS data sets (see, e.g., Long and Covell 1989). In 1989, following a recommendation of the NAS Panel to provide outside researchers greater access to TCMP data, IRS initiated a new external research program. Proposals from outside researchers who need access to selected TCMP files are competitively reviewed, and for those selected, IRS runs the analysis programs designed by the researchers on IRS internal TCMP files.

³⁸ The majority of all dollar adjustments IRS auditors make are contested by the taxpayer—individuals contest almost two-thirds, larger corporations appeal over 80 percent—and appeal rates in both IRS regular and TCMP audit program have been on the rise (IRS 1989a:29–30; personal communication with William Lefbom, chair of IRS's TCMP, 1991). IRS appeal officers end up sustaining less than half of the dollar adjustments IRS auditors recommend—45 percent for individuals, 25 percent for large corporations (IRS 1989a:31; see also Long 1986); however, TCMP up to now has been based solely on initial auditor recommendations.

³⁹ Only returns without business income were included in that sample, thus avoiding some of the disagreements that might arise in the application of more complicated business provisions (Elffers et al. 1989).

different returns; only on slightly more than a third of the returns (36 percent) on which adjustments were recommended did both tax inspectors make an adjustment, and for these there were additional significant differences in the adjustment amounts. Comparisons with the "expert" team of inspectors showed major differences in about half of all comparisons. Even when the auditors and expert team made an adjustment on the same return, disagreements again occurred over amount. Sometimes the expert team felt the original auditor had been too harsh, sometimes too lenient, with amounts differing in both directions by up to 50,000 guilders (about \$25,000).

While there are significant differences between the Dutch and U.S. tax systems and audit procedures, some preliminary examinations undertaken by state tax authorities in the United States have turned up important differences among state auditors' judgments. Although no systematic study of the reliability or validity of IRS audit-based (TCMP) measures appears to have been carried out, procedural irregularities, and problems of interauditor and interoffice variability have been noted in IRS audit-based measures, at least in prior years (see U.S. Senate 1975:153; GAO 1979b; IRS 1974, 1977;⁴⁰ Long 1980a:65–78; 1986).

Self-Reports

A third approach to measuring tax compliance is taxpayer self-reports. Used widely in research on juvenile delinquency (Hindelang, Hirschi and Weis 1981) and in studying legal and normative violations in a broad range of other contexts, self-reports are the only method that can provide detailed information concerning taxpayer motivation, attitudes, knowledge and beliefs. Not all taxpayers when surveyed will honestly report whether they have cheated on their taxes, and the extent of this unreliability in self-report data is not known (see particularly Kinsey 1984; Panel Report, pp. 220–27). Nor can this method capture unintentional misreporting about which the taxpayer is unaware. Memory lapses can also be a problem. Further, since over half of all individual federal income tax returns are professionally prepared, most taxpayers may not know (or understand) many tax-relevant matters concerning their individual return. Finally, just as official audit-based measures reflect the government's definition of noncompliance, self-reports reflect the taxpayer's—and the two definitions need not agree.

In fact, Hessing, Elffers, and Weigel (1988) found no correlation between self-reported noncompliance and official auditor findings in a sample of Dutch taxpayers who had recently been au-

⁴⁰ Various unpublished regional and national reports of the Internal Audit Division on TCMP Phase II, Cycles 3, 4, and 5).

dited.⁴¹ Differences went in both directions. Taxpayers didn't necessarily view themselves as noncompliant when audits turned up adjustments, while others saw themselves as noncompliant when audits came back clean. Further, audit-based and self-report measures in their study resulted in very different conclusions when hypothesized causes of noncompliance were tested. Kinsey (1988) was able to replicate these results using U.S. taxpayers (see also Kinsey 1990). Not only did Kinsey also find little association between audit results and self-reported noncompliance, but she was able to reproduce similar differences in substantive conclusions depending on the choice of compliance indicator.

Some interpreted the lack of correspondence between government audits and self-reports in the original Dutch study as an indication of the unreliability of self-reports (see, e.g., Panel Report, p. 224). However, in her replication, Kinsey controlled for measurement method since both audit adjustments and perceived noncompliance were self-reports. Thus, these differences cannot be attributed wholly to unreliable self-reports, and the root cause, as Kinsey (1988) argues, may instead be differences in the definitional interpretations of noncompliance taxpayers and auditors use. This is consistent with findings of the GAO (1976a) that the majority of audited taxpayers either do not understand, or do not agree with, IRS auditor findings (see also GAO 1982; IRS 1987b).

Return and Prediction-based Measures

Two indirect methods for measuring tax noncompliance have also been utilized: changes in return characteristics and prediction-based (DIF) scores. Compared with direct measures, these indirect measures are potentially less costly to implement, since they are often based on information from secondary sources. Indirect measures are also less reactive (Webb et al. 1966) than direct measures based on audits or self-reports, and thus potentially could possess an advantage in panel or longitudinal studies. But indirect measures are useful only to the extent they adequately mirror actual compliance.

The first of these indirect methods, the "return-based" measure, uses year-to-year changes in tax return items to proxy changes in compliance. This method was pioneered in Schwartz and Orleans (1967) and used recently by McGraw and Scholz (1991) but has not been widely employed. Return-based measures are less intrusive and, even when gathered by survey methods,

⁴¹ See also Elffers, Weigel, and Hessing (1987). In a followup to their comparison of Dutch tax inspectors judgments (see Elffers et al. 1989, 1990, 1991), Elffers et al. interviewed the taxpayers whose returns had been examined and asked them about their tax noncompliance on that return. Whether or not the taxpayers were confronted with the government inspectors' findings, there was little agreement between the taxpayers' reported perceptions of their noncompliance and that of the tax inspectorate.

may be viewed as less sensitive or threatening by potential respondents. Their applicability thus far has been restricted to studies with a temporal component, and to designs that eliminate potential confounding influences that may alter the composition and/or level of income and deductions over time. Because they are already available to the IRS and less reactive, the Panel recommends (ch. 4) that IRS routinely use return-based "proxy" measures for evaluating the impact of IRS compliance initiatives.

However, no study to date has sought to assess the validity of the assumptions on which return-based measures are based. Accordingly, for this essay we undertook a comparison of return-based measures and IRS audit-based (TCMP) indices, using a national sample of IRS panel data (see Long and Schwartz 1987). We found that changes in tax reported on the return (the return-based measure) and changes in compliance (measured through TCMP audits) moved entirely independently from one another, with correlations in the range of .02 to .06. At least in these data consisting of a national random sample of about 2,000 taxpayers, year-to-year changes in a taxpayer's personal financial circumstances, rather than changes in compliance behavior, appear to dominate the return-based change scores.⁴² In an idealized experimental setting starting with perfectly equivalent treatment and control groups, detecting a "compliance effect" using return-based measures would appear to be exceedingly difficult even with very large sample sizes. Since idealized conditions in an experiment rarely hold true, it seems quite plausible that return-based scores might yield misleading results.⁴³ Thus, the Panel's reliance on return-based compliance measures for many of its recommended research initia-

⁴² The file the authors had available included information from both the 1969 and 1971 returns of a random sample of about 2,000 taxpayers along with results from IRS TCMP audits of both sets of return (the data are described in more detail in Long and Schwartz 1987). We carried out an analysis of how changes in tax reported on the 1969 vs. 1971 return were associated with any corresponding changes in IRS's 1969 and 1971 TCMP auditor findings. Despite experimenting with a variety of types of indices reflecting either the relative or absolute size and direction of changes, we found no significant patterns of association whether assessed using correlation coefficients or graphically through scatter plots. Nor did results materially differ when we analyzed the sample as a whole or subdivided into more homogenous IRS examination and income classes. It is, of course, possible that return-based measures would act as a better proxy when a different measure of true compliance, rather than TCMP, was used.

⁴³ The Panel recognized a further potential problem in using this index to assess the impact of experimental manipulations. If the manipulation had any impact on a taxpayer's work effort or expenditures (i.e., the true amounts that should be reported on the return), then this would be confounded with any compliance effect (Panel Report, p. 232; see also Collins and Plumlee 1991). However, the Panel concluded (p. 232): "Under most circumstances, these measurement problems will not pose serious threats to the analysis, and changes in return items will provide a fairly good if somewhat imprecise measure of the compliance effects of experimental interventions." The evidence thus far does not appear to bear this out.

tives seems premature. Such measures should not be relied on until their reliability and validity can be established.

The other indirect or “prediction-based” method develops surrogate compliance scores based on more easily measurable items that are correlated with actual compliance levels. Similar techniques have been used in many fields to predict or forecast a wide range of behaviors, from consumer satisfaction to criminal recidivism. In tax, IRS (1979b) has developed discriminant function (DIF) formulas using TCMP data that attempt to predict noncompliance from items reported on a return. These DIF formulas are used to screen returns for audit potential at the time they are filed. In one study, IRS used these DIF scores to forecast voluntary compliance levels in each community (at the three-digit zip code level), employing these predictions as a surrogate compliance measure. A 1969 cross-sectional data base employing this index has been used in a number of compliance studies⁴⁴ (Witte and Woodbury 1985; Dubin and Wilde 1988; Beron, Tauchen, and Witte 1990). The Panel Report recommended (p. 228) that this data base be updated if the validity of DIF-based measures can be validated. Recently, IRS initiated a new study to that end.⁴⁵ Preliminary findings suggest that DIF scores have a statistically significant but modest correlation with actual compliance levels, accounting at most for only 10 percent of the variation in TCMP-based compliance measures.⁴⁶ Studies using IRS TCMP and DIF data from the 1970s (IRS 1974, 1977; Long 1980a) also found significant reliability problems when researchers used DIF to assess geographic differences in compliance levels (see also GAO 1976b).

The Basic Measurement Challenge

Given these differing bases for compliance measures, it should not be surprising that they don’t always agree. Indeed, the limited evidence from direct comparisons of these methods suggests that little association between many of these measures exists. In the case of direct methods, each approach reflects differences in definitions, perceptions, and interpretations of the distinct parties involved—the researcher (direct observation), the government (audit-based measures), and the taxpayer (self-reports). Differences among the resulting measures can be reduced (although not eliminated) by more careful attention to issues of scope when defining what constitutes noncompliance, by greater specificity in the information we seek, and by improved understanding of how and why differences in perceptions and interpretations occur.

⁴⁴ “Project 778 Regression Model”: Some Pertinent In-House Data on Factors Affecting Compliance” (unpublished memorandum, 24 Aug. 1978).

⁴⁵ From unpublished IRS listing of active projects, Research Division, Assistant Commissioner (Planning and Research) (March 1991).

⁴⁶ Personal communication from Dennis Cox, IRS, 11 April 1991.

As yet little sustained attention has been given to these questions in a tax context, or to standard issues of reliability and validity of the individual compliance measures.⁴⁷ Yet, we fear, a sustained research effort on such measurement issues will be necessary before significant forward progress on substantive compliance questions can be made. One sign of any field's growing maturity is the attention given to precisely such measurement issues.

There are no simple shortcuts. The solution is not, as the Panel seems to suggest, to set up one or two of these methods (based on official government statistics) as the criterion and aim research at bringing other methods into line with them. Neither validity nor reliability should be presumed. Nor should we restrict ourselves to the present types of data sources, as the Panel's recommendations infer, simply tinkering with what we currently rely on. We need to search for new innovative approaches and identify strategic situations where better measures could be developed or found, building in comparisons among methods and measures along the way. Further, we need to focus more narrowly on specific types of noncompliance, and not presume to measure all things for all people in a single item or simple one-dimensional scale. It seems likely that different methods will prove advantageous for measuring different types of behavior or when obtaining the perspectives of different sets of actors (taxpayer, tax preparer, tax auditor, etc.) in the process by which compliance becomes defined. Measures need to be matched to the scope of behavior in our theoretical models. Most important, we need to focus on ways to move away from one-shot measurement strategies toward developing longitudinal data that track compliance of individual taxpayers over time.

SETTING NEW SUBSTANTIVE AGENDAS FOR RESEARCH

The field of tax compliance research is in many ways at a crossroads. It has found that simplistic theories, and those imported directly from other, even related, areas and applied without much adaptation to the specific context of tax behaviors, have not done a very good job of explaining taxpayer compliance. More elaborate and original frameworks—some have called them “second generation” theories (Klepper and Nagin 1987)—have more recently emerged, but progress is still hampered by profound limits in available measures. Beyond the critical need for better data, there are other strategic concerns. Four areas are discussed below: (1) organizing research efforts, (2) the importance of legal context, (3) the role of tax specialists, and (4) tax authorities as research subjects.

⁴⁷ There has been more work at analyzing the reliability and validity of aggregate tax noncompliance estimates, but for that work different issues and methods often dominate.

Strategic Concerns in Organizing Research Efforts

The choice of research topic often reflects personal familiarity, habit, or convenience. Research on tax compliance—including much of our own—has largely focused rather narrowly on individual rather than corporate tax compliance; on accuracy in reporting on returns rather than on delinquencies in payment, filing, withholding, or compliance with the myriad of other types of tax duties; on income taxes rather than on employment, sales, value-added, excise, property or other forms of taxation; and with a single tax system (that of the researcher's own country).

As individual researchers and as a field, we need to think more strategically and broaden our research horizons. Other tax contexts, as well as other forms of noncompliance, may offer strategic advantages when testing a given theory or model: to help disentangle the influence of highly interrelated variables, estimate the impact of factors that are relatively constant in a single setting, test generalizability, etc. Further, the mental exercise of considering tax compliance behaviors in a wider array of contexts can in itself lead to new and valuable theoretical insights.

This process can be fostered through the collaboration of researchers with diverse perspectives, specialties, disciplinary, cultural, and state backgrounds. Such teamwork should be encouraged. This will also advance work on topics and contexts underrepresented in past research because of their especially demanding nature. For example, it is difficult to mount an effective study of corporate tax compliance without understanding corporate tax laws, organizational behavior theory, competitive forces, and business strategy, not to mention the cultural, social, economic, psychological, and other factors that affect individual behavior. Cross-cultural, cross-national, and cross-tax type comparisons—despite their potential importance to advancements in this field—also present similar challenging contexts for research. With measurement a critical issue, and the need to better assess the reliability and validity of our (ideally multiple) measures, expertise in measurement and related methodological issues often is required. Few if any researchers or single disciplines possess the necessary theoretical insights, technical skills, specialized tax and methodological knowledge needed. The research process needs to encourage more truly collaborative studies that draw on strengths from many disciplines and jurisdictions.

Further, within this broader framework, individual studies need to be more tightly focused. We need to be willing to give up the seductive view that *all* tax noncompliance can be explained in a single overarching theory or by a single empirical study. Taxpayers and tax behaviors are too diverse, social settings and legal contexts too complex, and our current knowledge too limited for sweeping generalities to succeed. With more modest goals for any

single study, we can set our sights on greater explanatory power and depth of understanding.

The Importance of the Legal Context

What formally distinguishes tax from other compliance fields is, of course, its particular legal context. Determining what about this legal context is important, and how and why it influences taxpayer compliance have long been major research concerns. But past research has considered a surprisingly limited selection of possible elements from this legal context. Only a handful of factors—those that fit into theoretical frameworks adopted from other fields and that are relatively easy to quantify, such as tax rates, penalty incidence, and severity—has dominated past research agendas.

In framing future research we need to vastly expand this list. Research dealing with the impact of other properties shaped by the legal context is now appearing, such as complexity, evasion opportunity, fairness, change, compliance burden, ambiguity, and uncertainty. But we still have only scratched the surface in identifying elements of the legal context that play important roles. Much more creative reflection is needed.⁴⁸ In such efforts, tax law and accounting scholars with specialized knowledge of this legal context need to play more active roles.

Changes in tax laws, as well as cross-jurisdictional comparisons, also can help us isolate influential factors in the legal context. For example, as the Panel Report notes, the breadth and magnitude of the changes in the United States made by the Tax Reform Act of 1986 provide a particularly rich opportunity for research, and a number of studies have been initiated.⁴⁹ The 1989 IRS Research Conference (IRS 1989e) presented a forum for the discussion of much of this research.

However, because most new tax statutes, including the 1986 reform, simultaneously affect many areas and often are quickly modified or superceded by additional legislation, isolating the elements which produce change in tax compliance is not easy. Further, many tax behaviors and attitudes prove quite resistant to change despite fundamental legal reforms (see, e.g., Carroll 1988, 1989b, 1990; McGraw and Scholz 1988, 1991; McGraw et al. 1989; Steenbergen et al. 1990).

More tightly focused studies can sometimes help. Most work has taken the taxpayer's net misreporting as the basic focus of analysis. Even this level of aggregation may confound results,

⁴⁸ Even for those that have been identified, adequately quantifying these factors presents many challenges.

⁴⁹ See, e.g., Carroll 1990, 1989b; Long and Swingen 1989; McGraw, Scholz, and Steenbergen 1989; McGraw and Scholz 1991; McKee and Gerbing 1989; Sharp 1989; Steenbergen, McGraw, and Scholz 1990; Swingen 1989; Szilagyi 1989, 1990.

making cause and effect relationships difficult to disentangle. Szilagyi (1989, 1990) presents an example of the utility of finer levels of disaggregation, to the individual line item of a return, in his documentation of changes in dependency exemption claims after inclusion of social security numbers was required.

The Role of Tax Specialists

Another distinctive aspect of tax, in contrast to many other compliance areas, is the important role played by professional advisors. As we previously noted, because of the complexity of tax requirements the majority of taxpayers seek assistance in filling out their return. Many taxpayers also seek professional advice to minimize their tax liabilities. Thus, the impact of tax specialists on compliance is receiving increasing attention (see, e.g., Ayres, Jackson, and Hite 1989; Cloyd 1991; Collins et al. 1988; Erard 1990a, 1990b; Harwood, Larkins, and Martinez-Vazques 1990; IRS 1987a; Jackson, Milliron, and Toy 1988; Kinsey 1987a, 1987b; Klepper and Nagin 1987; Klepper et al. 1988; Long and Swingen 1989; Sawyers 1991; Swingen and Long 1990; Tomasic and Pentony 1990).

The Panel Report recommends a prodigious research agenda of six unconnected studies in this area,⁵⁰ envisioning research that looks first at taxpayers and their views on using tax practitioners, then separately considers tax practitioners' perspectives, and finally (in another research program) examines the activities of IRS. Further, each study proposes to use a single (and often differing) measure of tax compliance, making integration of findings across studies especially problematic.

Given the widely differing ways that noncompliance is perceived among the parties, a more integrated study approach that seeks to interview taxpayers, their tax advisors, and IRS tax personnel with whom they interact within a single protocol might yield higher returns. This strategy would allow fuller investigation of the dynamics of the roles of taxpayers, tax practitioners, and the IRS in the compliance process. Such an approach needs to incorporate multiple measures of compliance using alternative methods, so that potential biases incorporated in any one approach do not improperly dictate results. An example of an innovative study

⁵⁰ These are (pp. 190–97): (1) a large-scale taxpayer survey on reasons underlying use of practitioners; (2) a longitudinal study of taxpayers' use of practitioners and its impact on compliance (indexed by self-report data); (3) a cross-sectional study of the impact of preparer use on compliance (indexed by IRS audit-based (TCMP) data); (4) replication of American Bar Foundation organization studies of practitioners (see Kinsey (1987a, 1987b) on larger samples and more locations to determine their generalizability); (5) implementation and evaluation of an "exemplary practitioner" program by the IRS to assess its impact on satisfaction with and demand for tax practitioners' services, as well as on client compliance levels (index not specified by Panel); and (6) experimental studies that manipulate practitioner routines to assess their impact on client compliance (indexed by changes over time in items reported on the return).

now underway in Oregon may provide a useful prototype. This study (directed by Kent W. Smith and Karyl A. Kinsey, American Bar Foundation, and Robert G. Mason, Oregon State University) is comparing compliance perceptions of the state tax auditor, the audited taxpayer, and where represented (for a subsample), his or her tax advisor through interviews with each party and reviews of auditor files.⁵¹

Further, we believe it is important to focus on how practitioners' impact taxpayers' ability—not just willingness—to comply. Finally, we also question the ethics⁵² and practicality of IRS's "designat[ing] and publiciz[ing] certain practitioners as exemplary in preparing returns and providing tax advice" (p. 195, study (5))⁵³ or designing experiments in cooperation with tax professionals aimed at the IRS's assessing how well practitioners do their job (p. 196, study (6)).⁵⁴ Given the independent (and often adversarial)

⁵¹ A second concern we have is the timing, magnitude, and hence costs of some of the studies proposed, relative to their likely return. We believe that smaller-scale research—some using existing data sources and others employing more in-depth protocols than those proposed by the Panel—might be the logical next step before large-scale cross-sectional or longitudinal studies of the types proposed are launched. E.g., some of the factual questions the Panel wished to answer on the patterns of practitioner use might initially be addressed by analysis of existing survey information, along with IRS Master File, Statistics of Income, and TCMP data bases. A strategically chosen sample from IRS master files, when combined with tax practitioner unique ID numbers, might allow preliminary tracking of just how often taxpayers change tax practitioners and the pattern of such moves (see Panel Report, pp. 190–92). Such information on the frequency and pattern of change in tax practitioner use would be a prerequisite for determining the feasibility and design for either the cross-sectional or longitudinal taxpayer surveys proposed by the Panel. Similarly, given what the Panel found to be the "preliminary state of knowledge about these issues" (p. 191), a series of pilot studies, involving in-depth personal interviews and other intensive protocols, would seem to be more useful for determining how the Panel's questions should be framed, as well as the feasibility of meeting the Panel's research goals with the study designs proposed (see also Collins, Milliron, and Toy 1988; Jackson, Milliron, and Toy 1988; Hite 1989.)

⁵² If practitioner participation could result in possible harm to clients (such as increased scrutiny of clients' behavior by the IRS), the practitioner's participation would be both unethical and unwise. Even if taxpayer privacy (from IRS) could be maintained (doubtful given current laws requiring practitioners to sign returns they prepare), informed consent procedures would appear necessary (Panel Report, pp. 241–45) before any evaluation of compliance effects were implemented. This, in turn, could seriously confound results (see Boruch 1989:362–66).

⁵³ It would be discriminatory for IRS to single out certain practitioners for this label, unless clear standards were set and uniformly applied. Even for a few pilot districts, doing so could be a large burden given the number of practitioners. Further, what standards could the IRS use to identify exemplary practitioners that would ensure that taxpayers as clients would receive expert service, *and* practitioners would be free to remain aggressive advocates on their clients' behalf in interpreting and applying ambiguous code provisions?

⁵⁴ The Panel's specific suggestion for the experimental manipulation for study (6) ignores the fact that such questions are already routinely asked by practitioners, consistent with current codes of professional ethics. Indeed, many practitioners have designed elaborate checklists for different income sources which they ask taxpayers to fill out to aid them in assuring that the

roles played by practitioners and the IRS, and their very real differences in compliance definitions, the Panel does not appear to appreciate adequately the almost inevitable conflicts that such joint experimentation might bring.⁵⁵

Tax Authorities as Research Subjects

An important theme running through this review is that tax compliance is an outcome of a process of interaction between taxpayers, tax advisors, and tax authorities within a larger social and legal setting. Tax compliance research has traditionally viewed two of these sets of players, taxpayers and tax advisors, as appropriate subjects for research. The third party in this triumvirate, the tax collector, has been examined from a curiously one-sided perspective. That is, the tax collector is dealt with not as a focus of research but only insofar as its policies have an effect on taxpayer compliance. While the values, norms, motivations, incentives, and goals of taxpayers and tax professionals are treated as empirical issues, those of the tax collector are simply presumed. This oversimplified, stereotypic, even “pasteboard” image of government agents as highly rational, ever efficient, revenue maximizers is in sharp contrast to their portrait in other fields, such as in the regulatory justice area, where such agents are treated as proper subjects of research. Unfortunately, treating tax collectors in this artificial manner creates false impressions of the entire interaction process. Hence, it undermines our understanding of the behavior of all parties—taxpayers, tax practitioners, and tax collectors—since their conduct is so intimately intertwined.

The Panel Report’s recommendations do not break new ground in continuing to view the taxpayer and tax practitioner, but not the tax collector, as the ultimate subjects of inquiry. Further, while the Report as its third priority research area recommends (pp. 197–206) “research on taxpayer contacts with the IRS,” all these studies are predicated on the unstated assumption that agency policies are basically sound and only issues of “fine-tuning” need be addressed. Thus, the Panel concentrates on (1) the phrasing of computer-generated mailings to taxpayers, (2) the number of taxpayer telephone service operators, and (3) the theme of IRS public information campaigns in the mass media.

There are times when a focus on packaging and marketing a product should be the top priority (see Panel Report, pp. 204–5;

income reported on the taxpayer’s “tax return. . . is true, correct, and complete” (American Institute of Certified Public Accountants 1988).

⁵⁵ The last time tax practitioners participated in a national survey of tax practitioners and advisers commissioned by IRS (1986, 1987c), the agency publicly criticized practitioners’ answers as reflecting attitudes *not* “compatible with the IRS mission,” while practitioners viewed these as simply carrying out their role of representing their clients’ best interests (see Jackson and Milliron 1989).

Cialdini 1989). But when even the IRS commissioner places the agency “at a crossroads” in its ability to “solve its problems to the satisfaction of both itself and taxpayers” (Crenshaw and Schatz 1990), a research strategy that examines fundamental issues of substance—the product, rather than mere packaging—should receive the highest priority. Yet serious problems in effectuating tax administration policies, and unanticipated outcomes or side effects of agency actions, have gone largely unstudied by compliance scholars because most of these topics aren’t consistent with the “pasteboard” image compliance models assume.

Other aspects of agency operations may have as important a long-term effect on taxpayer ability and willingness to comply as the number of audits or the severity of penalties the agency metes out. For example, at least eleven IRS internal audits of the quality of its correspondence with taxpayers have consistently shown serious deficiencies (see Burnham 1989:124). A recent GAO study (1988b) found that half (48 percent) of the letters sent by the IRS branch responsible for answering taxpayer inquiries were “incorrect, unresponsive, unclear, or incomplete” and that one third (31 percent) contained what GAO termed “critical errors . . . that adversely affected that taxpayer or the IRS,” such as making incorrect adjustments to a taxpayer’s account or providing incorrect information. Nearly one quarter (22 percent) of all IRS correspondence to taxpayers contained “typing, spelling, or grammatical errors,” and over two-thirds (68 percent) did not comply with one or more IRS written procedures “designed to foster good taxpayer relations” such as failing to acknowledge a taxpayer’s inquiry (49 percent), failing to apologize when the problem occurred because of an IRS error (70 percent), failing to stop automatically billing notices while the taxpayer’s response is being handled (19 percent), or failing to tell (or incorrectly stating) the date of the taxpayer’s letter to which the IRS was responding (47 percent) (*ibid.*, pp. 24–25). With these and other informational shortcomings,⁵⁶ an important area for future research clearly is how the nature and quality of the service IRS provides impact taxpayer compliance.

Other quality issues arise in tax enforcement programs. Given limited resources for audits, there are obvious trade-offs between pursuing wider coverage with less detailed scrutiny versus fewer but more in-depth examinations and between civil versus criminal enforcement (Long 1981b). How are the frequency and amount of

⁵⁶ Since all taxpayer correspondence that does not result in a change to the taxpayer’s account is automatically destroyed as soon as the IRS response is sent, it is difficult for IRS to deal with taxpayer followup letters engendered because its original response was inaccurate, unresponsive, or incomplete (GAO 1988b:10–11, 22–23; see also GAO 1991). GAO has also noted substantial problems in many other IRS activities, including distributing tax forms (1990c); in computer processing, proper crediting, and balancing of accounts (1989a); and in the accuracy of IRS responses to taxpayer telephone inquiries (1988c, 1989b, 1990b).

misreporting detected during an audit related to the thoroughness or time taken for the audit? What is the impact of an audit or other enforcement contact on tax evaders when it is insufficiently detailed to detect their evasion, or results in no more than payment of back taxes plus interest? Alternatively, how are taxpayers who make an honest effort to comply affected when an audit, because of its superficiality, incorrectly asserts more taxes than are owed? (what Stigler 1970 has termed “overenforcement”). What is the impact of an audit on future compliance when the examiner’s findings are overturned on appeal as increasingly occurs?

Instead of concentrating upon weighty policy matters or important theoretical issues, the Panel Report focuses on ways IRS could more effectively evaluate small variations in the implementation of day-to-day activities. The Panel argues that IRS’s traditional criteria for evaluating pilot programs (feasibility, program cost, and direct revenue yield) are “incomplete . . . and may be seriously misleading” since they do not consider potential compliance effects (see pp. 198–99; also, Scholz 1989).⁵⁷ Unfortunately, the Panel’s solution (pp. 200–204) for incorporating compliance effect estimates relies largely upon use of proxy, return-based measures whose validity, we have previously seen, is yet to be demonstrated.

Another thrust of the Panel’s recommendations concerns the need for “[t]esting promising innovations with randomized experimental designs” (p. 198). Experimental designs are not new to the tax agency. The Bureau of Internal Revenue was one of the first in the federal government to employ scientific sampling principles (see Natrella 1966; Duncan and Shelton 1978:37) that form a foundation for many experimental designs, and the IRS has conducted field experiments to evaluate policy alternatives for many decades.⁵⁸ Beyond Boruch’s very thoughtful discussion of some issues in the implementation of experimental and quasi-experimental designs in tax settings, the Report offers few specifics on how to improve these existing efforts. Further, in our opinion, the Panel generally underestimates the costs and practical complexities of

⁵⁷ We would broaden evaluation criteria even further, beyond compliance impact, to the effects on taxpayer burden and satisfaction, equity, and fairness (both substantive and procedural).

⁵⁸ One example of an randomized experiment IRS conducted over twenty-five years ago was the Discriminant Function Audit Test (see IRS Prospectus for Discriminant Function Audit Test (DFAT), April 1964; IRS 1979b), which used an ingenious double-blind design to compare the relative effectiveness of five alternative methods for selecting returns for examination. IRS has conducted at least ten randomized tests over twenty years as part of the TCMP (IRS 1989b), including one to assess the specific deterrence effects of tax audits involving TCMP Phase III Cycles 3–5 (1969, 1971, 1973 tax years; see Long and Schwartz 1987) and two studies in the most recently completed Phase III Cycle 9 survey (1985 tax year), which looked at the impact of having information returns as well as multiyear tax records available to tax auditors. Other examples of the IRS’s recent use of randomized experiments are discussed by Boruch (1989) in a paper commissioned by the Panel.

implementing such experiments within a large bureaucracy like that of the IRS, and overestimates the likelihood of obtaining important short-term changes in compliance from small variations in the wording or form of IRS contacts with taxpayers (see Panel Report, pp. 199, 201; but also see Hite 1988).

In the long run, contacts IRS has with taxpayers, both directly and filtered through social networks and the media, do exert a potentially very important *cumulative* influence on taxpayers' attitudes and perceptions, as well as on their ability to comply with, and to understand, tax requirements. In the short run, detecting these effects even under experimental conditions should prove difficult. Traditional randomized experiments may prove more useful in assessing the impact of IRS programs on taxpayers' technical understanding of tax requirements than in assessing the impact of IRS activities on attitudinal changes. This is because specific improvements in taxpayers' technical knowledge are more likely to be quickly observable and can be more readily linked directly to the experimental manipulation. Also, adequate measures of program success may be easier to obtain. However, experiments could provide a better understanding of the relationship between information and attitudes. For example, such experiments could explore how much technical information may be given before it creates an information overload that reinforces negative beliefs that tax rules are too complicated for ordinary taxpayers to comply with. This might be a possible problem with the "National Tax Test" proposed by Cialdini (1989), which the Panel considered. Finally, it is our opinion that the provision of tax information should be valued and its effectiveness assessed primarily in terms of its success in assisting taxpayers, and not designed simply as an attempt to manipulate taxpayers' norms and values (*ibid.*, p. 209; Panel Report, pp. 204–5).

CONCLUSION

There are few areas of the law that affect as many citizens more profoundly than taxes, particularly income taxes. Not only do tax laws influence countless day-to-day decisions at a personal level, but they structure the institutions in society in ways that constrain, as well as enrich, our lives. Few laws have the immediacy of taxes. Along with traffic regulations, this is the legal area ordinary citizens are most likely to come face to face with government authorities. Partly as a result of these encounters, and their sharing through social networks, tax laws play a vital role in shaping personal perceptions of our legal system and of the legitimate obligations we owe our government. Thus, studying taxpayer compliance is of interest not only because of the importance of taxes to the functioning of an organized society but because such studies

provide a window through which we can examine crucial issues in the law and society field.

While inquiries on why citizens pay (or fail to pay) taxes are as old as organized governments, the recent National Academy of Sciences Panel Report represents an important milestone—signifying that tax compliance research has come of age. In taking stock of what we have learned and where we should go next, a number of lessons can be drawn over challenges we now face.

First, it is important to resolve what behaviors are to be defined as “noncompliant.” Failure to squarely face this definitional issue has impeded progress in the field. Because many tax requirements are not only complicated but ambiguous as well, what has been treated as noncompliance varies depending on whether the views of the taxpayer, tax practitioner, or tax collector are sought. Further, confusion over definitional boundaries has impeded recognition that tax evasion is only one form of noncompliance and that there are indeed a multiplicity of reasons apart from an evasion motive why noncompliant behavior occurs.

A second important lesson is the need for better measures and the serious obstacle their absence represents. Current methods often yield quite disparate results. Indeed, we would argue that developing better measures of tax compliance is currently the single most difficult challenge researchers in our field face.

Third, as individual researchers and as a field, we need to break out from the narrow rut within which so much of past research has been cast. Broadening our research horizons to encompass more types of taxpayers (not just individuals), a wider array of tax requirements (not just income tax reporting), many different tax behaviors (not simply evasion), and a more comparative context (not simply one jurisdiction at a single point in time) will offer significant strategic advantages. Further, we need to consider a much wider range of elements in the legal context, the functions these play in shaping tax compliance (and noncompliance), and the role of tax specialists in translating and interpreting the law.

Finally, we need to recognize that tax compliance is an outcome of a process of interaction between taxpayers, tax advisors, and tax authorities and that all three parties—not just taxpayers and tax advisors—are proper and necessary subjects of research. The failure to subject tax collectors to serious study has resulted in an artificial treatment of their role in past compliance theories, undermining our ability to understand not only the government’s behavior but the behavior of all parties since their conduct is so intimately intertwined.

REFERENCES

AITKEN, Sherrie S., and Laura BONNEVILLE (1980) *A General Taxpayer*

- Opinion Survey*. Report prepared by CSR, Inc., under contract for the Internal Revenue Service, March.
- ALLINGHAM, Michael G., and Agnar SANDMO (1972) "Income Tax Evasion: A Theoretical Analysis," 1 *Journal of Public Economics* 323.
- ALM, James (1990) "Did TRA86 Simplify Tax Matters?" Presented at the American Economic Association meetings, Washington, DC, 28–30 Dec.
- (1991) "A Perspective on the Experimental Analysis of Taxpayer Reporting," 66 *Accounting Review* 577.
- ALM, James, and William BECK (1991) "Wiping the Slate Clean: Individual Response to Tax Amnesties," 57 *Southern Economic Journal* 1043.
- (1990) "Tax Amnesties and Tax Revenues," 18 *Public Finance Quarterly* 433.
- ALM, James, Michael McKEE, and William BECK (1990) "Amazing Grace: Tax Amnesties and Compliance," 43 *National Tax Journal* 23.
- AMERICAN BAR ASSOCIATION COMMISSION ON TAXPAYER COMPLIANCE (1987) *Report and Recommendations* (July). Washington, DC: American Bar Association. (Reprinted in "Report and Recommendations on Taxpayer Compliance," 41 *Tax Lawyer* 329.)
- AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS (AICPA) (1988) *Statement of Responsibilities in Tax Practice*, No. 1 (Revised), Aug. New York: AICPA.
- ARTHUR D. LITTLE OPINION RESEARCH CORPORATION (1988) *Development of Methodology for Estimating the Taxpayer Paperwork Burden*, Final Report under contract to the Internal Revenue Service (June). Washington, DC: Internal Revenue Service.
- AYRES, Frances L., Betty R. JACKSON, and Peggy S. HITE (1989) "The Economic Benefits of Regulation: Evidence from Professional Tax Preparers," 64 *Accounting Review* 300.
- BARDACH, Eugene (1989) "Moral Suasion and Taxpayer Compliance," 11 *Law & Policy* 49.
- BARKER, Phyllis Ann (1966) "A Study of Errors by Taxpayers on Federal Income Tax Returns with Implications for Instruction." Ph.D. dissertation, Northern Illinois University.
- BECK, Paul J., and Woon-Oh JUNG (1989a) "Taxpayers' Reporting Decisions and Auditing under Information Asymmetry," 64 *Accounting Review* 468.
- (1989b) "Taxpayer Compliance under Uncertainty," 8 *Journal of Accounting and Public Policy* 1.
- BECK, Paul J., Jon S. DAVIS, and Woon-Oh JUNG (1991) "Experimental Evidence on Taxpayer Reporting under Uncertainty," 66 *Accounting Review* 535.
- BECKER, Gary S. (1968) "Crime and Punishment: An Economic Approach," 76 *Journal of Political Economy* 169.
- BERON, Kurt J., Helen V. TAUCHEN, and Ann Dryden WITTE (1990) "The Effects of Audits and Socio-economic Variables on Compliance." Presented at Conference on Tax Compliance and Tax Law Enforcement, University of Michigan, Ann Arbor, Dec.
- BORUCH, Robert F. (1989) "Experimental and Quasi-experimental Designs in Taxpayer Compliance Research," in Roth et al. 1989 (*which see*):App. B, 339–79.
- BRADFORD, David F. (1986) *Untangling the Income Tax*. Cambridge, MA: Harvard University Press.
- BUREAU OF INTERNAL REVENUE (1950) *Annual Report of the Commissioner*. Washington, DC: Government Printing Office.
- (1949) *Annual Report of the Commissioner*. Washington, DC: Government Printing Office.
- (undated) *The Audit Control Program*. Washington, DC: Government Printing Office.
- BURNHAM, David (1990) *A Law unto Itself: Power, Politics and the IRS*. New York: Random House.
- CARROLL, John S. (1990) "How Taxpayers Think about Their Taxes: Frames and Values." Presented at University of Michigan Conference on Tax Compliance and Tax Law Enforcement, Ann Arbor, Dec.
- (1989a) "A Cognitive-Process Analysis of Taxpayer Compliance," in Roth and Scholz 1989 (*which see*):228–72.

- (1989b) "Fairness and Equity: TRA '86 Effects on Taxpayer Views, Goals and Decision Making." Presented at 1989 IRS Research Conference, Washington, DC, 16–17 Nov. Reprinted in part in IRS 1989e (*which see*):122.
- (1988) "Tax Law Changes and Taxpayer Decision Making." Presented at IRS Frank M. Malanga Memorial Research Conference, Washington, DC, 16–17 Nov. Reprinted in part in IRS 1989c (*which see*):26.
- CHRISTIAN, Charles W., and Sanjay GUPTA (1990) "The Influence of Tax Table Use on Income Tax Compliance." Arizona State University College of Business Working Paper.
- CIALDINI, Robert B. (1989) "Social Motivations to Comply: Norms, Values, and Principles," in Roth and Scholz 1989 (*which see*):200–227.
- CLOTFELTER, Charles T. (1983) "Tax Evasion and Tax Rates: An Analysis of Individual Returns," 65 *Review of Economics and Statistics* 363.
- CLOYD, C. Bryan (1991) "The Effects of Accounting Method, Ambiguity Type, and Client Risk Preference on Recommendations of Tax Preparers." Presented at Midyear Meeting of American Taxation Association, Albuquerque, NM, 8–9 Feb.
- COLLINS, Julie H., Valerie C. MILLIRON, and Daniel R. TOY (1988) "Taxpayer Objectives and Their Implications." Presented at IRS Frank M. Malanga Memorial Research Conference, Washington, DC, 16–17 Nov. Reprinted in part in IRS 1989c (*which see*):119.
- COLLINS, Julie H., and R. David PLUMLEE (1991) "The Taxpayer's Labor and Reporting Decision: The Effect of Audit Schemes," 66 *Accounting Review* 559.
- COWELL, Frank A. (1990) *Cheating the Government: The Economics of Evasion*. Cambridge, MA: MIT Press.
- (1985) "The Economic Analysis of Tax Evasion," 37 *Bulletin of Economic Research* 163.
- CRANE, Steven E., and Farrokh NOURZAD (1990a) "Tax Rates and Tax Evasion: Evidence from California Tax Amnesty Data," 43 *National Tax Journal* 189.
- (1990b) "Analyzing Income Tax Evasion Using Amnesty Data with Self-Selection Correction: The Case of Michigan Tax Amnesty Program." Presented at University of Michigan Conference on Tax Compliance and Tax Law Enforcement, Ann Arbor, Dec.
- CRENSHAW, Albert, and Willie SCHATZ (1990) "At the IRS, a Long Form of Problems," 7 *Washington Post Nat'l Weekly Ed.*, 16–22 April, no. 24, at 20.
- DORGAN, Congressman Byron L., and the Dorgan Task Force (1987) "Narrowing the \$100 Billion Tax Gap," *Tax Notes*, 30 Nov., at 925.
- DUBIN, Jeffrey A., Michael J. GRAETZ, and Louis L. WILDE (1990a) "The Changing Face of Tax Law Enforcement, 1978–1988," 43 *Tax Lawyer* 893.
- (1990b) "The Effect of Audit Rates on the Federal Individual Income Tax, 1977–1986," 43 *National Tax Journal* 395.
- (1987a) "Are We a Nation of Tax Cheaters? New Econometric Evidence on Tax Compliance," 77 *American Economic Review* 240.
- (1987b) "Penny-wise and Pound-Foolish: New Estimates of the Impact of Audits on Revenue," *Tax Notes*, 25 May, at 787.
- DUBIN, Jeffrey A., and Louis L. WILDE (1988) "An Empirical Analysis of Federal Income Tax Auditing and Compliance," 41 *National Tax Journal* 61.
- DUNCAN, Joseph W., and William C. SHELTON (1978) *Revolution in United States Government Statistics*. Washington, DC: U.S. Department of Commerce, Office of Federal Statistical Policy and Standards, Oct.
- ELFFERS, Henk (1991) *Income Tax Evasion: Theory and Measurement*. Deventer: Kluwer.
- ELFFERS, Henk, Henry S. J. ROBBEN, and Dick J. HESSING (1991) "Under-reporting Income: Who Is the Best Judge—Tax-payer or Tax Inspector?" 154 *Journal of the Royal Statistical Society* (Ser. A), Part 1, 125.
- (1990) "Confronting the Taxpayer with the Judgement of the Tax Inspector." Presented at annual meeting of International Association for Research in Economic Psychology, Exeter, England, July.
- (1989) "Reliability and Validity of Tax Audits: Can We Have Confi-

- dence in the Opinion of the Dutch IRS on Noncompliance?" Working Paper, Erasmus Centre for Sociolegal Tax Research.
- ELFFERS, Henk, Russell H. WEIGEL, and Dick J. HESSING (1987) "The Consequences of Different Strategies for Measuring Tax Evasion Behavior," 8 *Journal of Economic Psychology* 311.
- ERARD, Brian (1990a) "The Impact of Tax Practitioners on Tax Compliance: A Research Summary." Presented at 1990 Internal Revenue Service Research Conference, Washington, DC, 15–16 Nov.
- (1990b) "Tax Practitioners and Tax Compliance: A Microeconomic Analysis of the Decision to Engage a Tax Preparer and Its Consequences." Ph.D. dissertation, University of Michigan.
- FARIOLETTI, Marius (1958) "Some Income Adjustment Results from the 1949 Audit Control Program," 23 *Studies in Income and Wealth* 239.
- (1952) "Some Results from the First Year's Audit Control Program of the Bureau of Internal Revenue," 5 *National Tax Journal*, March, at 65.
- FISHER, Ronald C., John H. GODDEERIS, and James YOUNG (1989) "Participation in Tax Amnesties: The Individual Income Tax," 42 *National Tax Journal* 15.
- FRATANDUONO, Richard J., and Gabriella A. BUCCI (1989) "Trends in the Voluntary Compliance of Taxpayers Who File Individual Income Tax Returns," in Internal Revenue Service, 1989 *Update: Trend Analysis and Related Statistics*, Document 6011 (Rev. 6-89).
- FRIEDLAND, Nehemiah, Shlomo MAITAL, and Aryeh RUTENBERG (1978) "A Simulation Study of Income Tax Evasion," 10 *Journal of Public Economics* 107.
- FRIEDMAN, Joel (1990) "Impact of Enforcement Action on Individual Taxpayer Behavior." Presented at 1990 Internal Revenue Service Research Conference, Washington, DC, 15–16 Nov.
- FRIEDRICH, Otto (1983) "Tax Cheating: Bad and Getting Worse," *Time*, 20 March 28, at 26.
- GENERAL ACCOUNTING OFFICE (GAO) (1991) *Tax Administration: IRS Needs to Improve Certain Measures of Service Center Quality* (GGD-91-66), March.
- (1990a) *Tax Administration: Profiles of Major Components of the Tax Gap* (GGD-90-53BR), April.
- (1990b) *Monitoring the Accuracy and Administration of IRS' 1989 Test Call Survey* (GGD-90-37), Jan.
- (1990c) *Tax Administration: IRS Needs to Improve Distribution of Tax Materials to the Public* (GGD-90-34), Jan.
- (1989a) *Financial Integrity Act* (AFMD-90-10), Nov.
- (1989b) *Tax Administration: Accessibility, Timeliness, and Accuracy of IRS' Telephone Assistance Program* (GGD-89-30), Feb.
- (1988a) *Tax Administration: Difficulties in Accurately Estimating Tax Examination Yield* (GGD-88-119), Aug.
- (1988b) *Tax Administration: IRS' Service Centers Need to Improve Handling of Taxpayer Correspondence* (GGD-88-101), July.
- (1988c) *Concerns About IRS' Telephone Assistance Program* (T-GGD-88-47), July.
- (1988d) *Investigating Illegal Income—Success Uncertain, Improvements Needed* (GGD-88-61), April.
- (1988e) *Tax Administration: IRS' Tax Gap Studies* (GGD-88-66BR), March.
- (1982) *Changes to Appeals Process Could Improve Settlement and Increase Taxpayers' Satisfaction* (GGD-82-54), July.
- (1979a) *Who's Not Filing Income Tax Returns? IRS Needs Better Ways to Find Them and Collect Their Taxes* (GGD-79-69), July.
- (1979b) *IRS' Audits of Individual Taxpayers and Its Audit Quality Control System Needs To Be Better* (GGD-79-59), Aug.
- (1976a) *Audit of Individual Income Tax Returns by the Internal Revenue Service* (GGD-76-54), Dec.
- (1976b) *How the Internal Revenue Service Selects Individual Income Tax Returns for Audit* (GGD-76-55), Nov.
- GIBBS, Larry (1988) Opening remarks at IRS Frank M. Malanga Memorial

- Research Conference, Washington, DC, 16–17 Nov. Reprinted in IRS 1989c (*which see*):3.
- GUSTAFSON, Charles H. (ed.) (1979) *Federal Income Tax Simplification*. A joint project of the American Law Institute, the Section on Taxation of the American Bar Association, and the American Law Institute–American Bar Association Committee on Continuing Professional Education. Philadelphia: American Law Institute.
- HANNO, Dennis M., and George R. VIOLETTE (1990) “The Cognitive Foundations of Taxpayer Compliance Decisions.” Presented at 1990 Internal Revenue Service Research Conference, Washington, DC, 15–16 Nov.
- HARVEY, James W., and Kevin F. McCROHAN (1990) “Improving Compliance with the Tax Laws by Using Marketing Strategies Borrowed from Voluntary Agencies.” Presented at 1990 Internal Revenue Service Research Conference, Washington, DC, 15–16 Nov.
- (1988) “Is There a Better Way of Improving Compliance with the Tax Laws? Insights from the Philanthropic Literature,” 7 *Journal of Public Policy and Marketing* 138.
- HARWOOD, Gordon B., Ernest R. LARKINS, and Jorge MARTINEZ-VAZQUEZ (1990) “Paid Tax Preparers’ Role in Noncompliance: Some Empirical Evidence.” Presented at annual meeting of American Accounting Association, Toronto, Ontario.
- HENRY, James S. (1983) “Noncompliance with U.S. Tax Law—Evidence on Size, Growth, and Composition,” in Sawicki 1983 (*which see*):15–111.
- HENRY, James S., with Stephen KASTENBERG (1989) “The Distribution of Federal Income Tax Noncompliance: Summary of New Findings and Policy Implications.” Report prepared for U. S. Senator Kent Conrad and Congressman Byron Dorgan and sponsored by Leadership for the New Century, Washington, DC, 27 July. Available from the authors.
- HESSING, Dick J., Henk ELFFERS, and Russell H. WEIGEL (1988) “Exploring the Limits of Self-Reports and Reasoned Action: An Investigation of the Psychology of Tax Evasion Behavior,” 54 *Journal of Personality and Social Psychology* 405.
- HESSING, Dick J., Karyl A. KINSEY, Henk ELFFERS, and Russell H. WEIGEL (1988) “Tax Evasion Research: Measurement Strategies and Theoretical Models,” in W. F. van Raaij, G. M. van Veldhoven, and K.-E. Warneryd (eds.), *Handbook of Economic Psychology*. New York: North Holland/Elsevier.
- HINDELANG, Michael, Travis HIRSCHI, and Joseph WEIS (1981) *Measuring Delinquency*. Beverly Hills, CA: Sage Publications.
- HITE, Peggy A. (1989) “A Positive Approach to Taxpayer Noncompliance,” 44 *Public Finance/Financier Publiques* 249.
- (1988) “An Examination of the Impact of Subject Selection on Hypothetical and Actual Taxpayer Noncompliance,” 9 *Journal of Economic Psychology* 445.
- HITE, Peggy A., and Gary A. MCGILL (1990) “Moral Appeal and Neutralization Strategies: Effects on Social Control of Taxpayer Compliance.” Presented at 1990 Internal Revenue Service Research Conference, Washington, DC, 15–16 Nov.
- INTERNAL REVENUE SERVICE (1990a) *Annual Report 1989*. Washington, DC: Government Printing Office.
- (1990b) *Income Tax Compliance Research: Net Tax Gap and Remittance Gap Estimates (Supplement to Pub. 7285)*. Publication 1415 (April).
- (1989a) *Evaluation of the IRS System of Projecting Enforcement Revenue*. Publication 1501 (Nov.)
- (1989b) *Taxpayer Compliance Measurement Program Handbook*. Document 6457 (May), rev. ed.
- (1989c) *Change and Complexity as Barriers to Taxpayer Compliance*. Document 7302 (6-89).
- (1989d) “Individual Income Tax Returns, 1988 Taxpayer Usage Study,” 9 *Statistics of Income Bulletin* 11.
- (1989e) *The Impact of the Tax Reform Act of 1986: Did It Improve Fairness and Simplicity?* Document 7302 (3-90).
- (1988) *Income Tax Compliance Research: Gross Tax Gap Estimates and Projections for 1973–1992*. Publication 7285 (March).

- (1987a) *The Role of Tax Practitioners in the Tax System: Report of the 1987 Research Conference*. Document 7302 (March).
- (1987b) *1987 Taxpayer Opinion Survey*. Data set available from ICPSR (No. 08927), University of Michigan, and from the Office of Tax Policy Research there. Described in IRS Document 7292 (1–88).
- (1987c) *Survey of Tax Practitioners and Advisers: Summary of Results by Occupation*. Washington, DC: Government Printing Office.
- (1986) *Survey of Tax Practitioners and Advisers, 1986*. Data set available from ICPSR (No. 08884), University of Michigan, and from the Office of Tax Policy Research there. Described in IRS 1987c (*which see*).
- (1983) *Income Tax Compliance Research: Estimates for 1973–1981*. Research Division (July).
- (1979a) *Estimates of Income Unreported on Individual Income Tax Returns*. Publication 1104 (Sept.)
- (1979b) *Discriminant Function (DIF) Handbook*. Document 6588 (Rev. 11–79).
- (1977) *Selection Report on District Return Selection*. Task Force Report (Feb.).
- (1975) *Effect of a Prior Year TCMP Audit*. Planning and Analysis Division.
- (1974) “Development of DIFs for Two Groups of Districts.” Joint Planning and Analysis Division and Audit Division Working Paper.
- (1973) *Measuring the Deterrent Effect of an Audit*. Planning and Analysis Division.
- (1970) *A Cross Section Regression Model of Audit and Non-Audit Factors Affecting Taxpayer Compliance*. Planning and Analysis Division (Oct.)
- (1968) *Report on the Role of Sanctions in Tax Compliance*. Planning and Analysis Division.
- JACKSON, Betty R., and Pauline R. JAOUEN (1989) “Influencing Taxpayer Compliance through Sanction Threat or Appeal to Conscience,” 2 *Advances in Taxation* 131.
- JACKSON, Betty R., and Valerie C. MILLIRON (1989) “Tax Preparers: Government Agents or Client Advocates: A Response to the IRS’s Survey on Tax Preparers Attitudes,” 167 *Journal of Accountancy* 76.
- (1986) “Tax Compliance Research: Findings, Problems, and Prospects,” 5 *Journal of Accounting Literature* 125.
- JACKSON, Betty R., Valerie C. MILLIRON, and Daniel R. TOY (1988) “Tax Practitioners and the Government,” 41 *Tax Notes*, 17 Oct., at 333.
- KAGAN, Robert A. (1989) “On the Visibility of Income Tax Law Violations,” in Roth and Scholz 1989 (*which see*):76–125.
- KENNEDY, Lorraine (1990) “Increasing Taxpayer Compliance by Changing Taxpayer Attitudes: A Laboratory Study Using a State Amnesty Program.” Discussed at 1990 Internal Revenue Service Research Conference, Washington, DC, 15–16 Nov.
- KIDDER, Robert, and Craig McEWEN (1989) “Taxpaying Behavior in Social Context: A Tentative Typology of Tax Compliance and Noncompliance,” in Roth and Scholz 1989 (*which see*):47–75.
- KINSEY, Karyl A. (1990) “Effects of IRS Enforcement: An Analysis of Survey Data.” Presented at Conference on Tax Compliance and Tax Law Enforcement, University of Michigan, Ann Arbor, Dec.
- (1988) “Measurement Bias or Honest Disagreement? Problems of Validating Measures of Tax Evasion.” American Bar Foundation Working Paper 8811.
- (1987a) “The Social Dynamics of Tax Encounters: Perspectives of Practitioners and Officials.” Presented at IRS Research Conference, Washington, DC, Nov.; see also in IRS 1987a(*which see*).
- (1987b) “Advocacy and Perception: The Structure of Tax Practice.” American Bar Foundation Working Paper. (Earlier version presented at 1986 annual meeting of Law and Society Association, Chicago).
- (1985) “Theories and Models of Tax Evasion.” American Bar Foundation Working Paper 84-2 (Revised). (A shorter version appeared under the same title in 18 *Criminal Justice Abstracts* (1986) 403.)

- (1984) "Survey Studies of Tax Noncompliance: A Compendium and Review." American Bar Foundation Working Paper 84-1, Dec.
- KLEPPER, Steven, and Daniel S. NAGIN (1989a) "The Anatomy of Tax Evasion," 5 *Journal of Law, Economics, and Organizations* 1.
- (1989b) "Tax Compliance and Perceptions of the Risk of Detection and Criminal Prosecution," 23 *Law & Society Review* 209.
- (1989c) "The Criminal Deterrence Literature: Implications for Research on Taxpayer Compliance," in Roth and Scholz 1989 (*which see*):126-55.
- (1987) "The Role of Tax Practitioners in Tax Compliance." Working Paper, Carnegie Mellon University.
- KLEPPER, Steven, Mark MAZUR, and Daniel S. NAGIN (1988) "Expert Intermediaries and Legal Compliance: The Case of Tax Preparers." Working Paper, Carnegie Mellon University.
- LeBAUBE, Robert A. (1989) "The Impact of TRA '86 on Taxpayer Service Programs." Presented at 1989 IRS Research Conference, Washington, DC, 16-17 Nov. Reprinted in part in IRS 1989e (*which see*):144.
- LEMPERT, Richard (1990) Comments at Conference on Tax Compliance and Tax Law Enforcement, University of Michigan, Ann Arbor, Dec.
- LONG, Susan B. (1990a) "Data Limitations and Statistical Artifacts in Modeling Choice Behavior." Comments presented at Conference on Tax Compliance and Tax Law Enforcement, University of Michigan, Ann Arbor, Dec.
- (1990b) "Current TCMP Estimates of Tax Evasion and Negligence." Center for Tax Studies Tabulations, Syracuse University, Jan.
- (1986) "The Use of Alternative Indicators in Assessing Federal Income Tax Noncompliance." Presented at annual meeting of American Society of Criminology, Atlanta.
- (1981a) "The Extent of Criminal Tax Evasion," 35 *Tax Notes*, 8 June 8, at 1325.
- (1981b) "Social Control in the Civil Law: The Case of Income Tax Enforcement," in H. L. Ross (ed.), *Law and Deviance*. Beverly Hills, CA: Sage Publications.
- (1980a) *The Internal Revenue Service: Measuring Tax Offenses and Enforcement Response*. Washington, DC: Government Printing Office.
- (1980b) "Measuring Deterrence: Imperfect Data and Estimation Bias." Ph.D. dissertation, University of Washington.
- LONG, Susan B., and David BURNHAM (1990a) "The Numbers Game: Changes in Tax Compliance During the Last 25 Years?" 46(10) *Tax Notes* 1177.
- (1990b) "Solving the Nation's Budget Deficit with a Bigger, Tougher IRS: What Are the Realities?" 48(6) *Tax Notes* 741.
- LONG, Susan B., and Andrew B. COVELL (1989) *IRS Taxpayer Compliance Measurement Program (TCMP) Phase III Cycle 9: Table 10 User's Guide*. Center for Tax Studies/Transactional Records Access Clearinghouse, Syracuse University.
- LONG, Susan B., and Richard D. SCHWARTZ (1987) "The Impact of IRS Audits on Taxpayer Compliance: A Field Experiment in Specific Deterrence." Presented at annual meeting of Law and Society Association, Washington, DC.
- LONG, Susan B., and Judyth A. SWINGEN (1989) "The Impact of the Tax Reform Act of 1986 on Compliance Burdens: National Survey Results." Presented at 1989 IRS Research Conference, Washington, DC, 16-17 Nov. Reprinted in part in IRS 1989e (*which see*):43.
- (1988a) "The Role of Legal Complexity in Shaping Taxpayer Compliance," in Van Koppen, Hessing, and Van Den Heuvel 1988 (*which see*):127-46.
- (1988b) "The Structure of Law and Illegal Behaviors." Presented at annual meeting of Law and Society Association, Vail (rev. 1989).
- (1987) "An Approach to the Measurement of Tax Law Complexity," 9 *Journal of the American Taxation Association*, Spring, at 22.
- MADEO, Silvia A. (ed.) (1990) *Proceedings of the Invitational Conference on Reduction of Income Tax Complexity*. Joint Project of American Institute of Certified Public Accountants, Tax Division and American Bar Associa-

- tion, Section of Taxation. Washington, DC: Tax Management Education Institute.
- MASON, Robert (1988) "Complexity of Tax Forms: Are They a Burden for the Honest or an Excuse for the Dishonest?" Presented at IRS Frank M. Malanga Memorial Research Conference, Washington, DC, 16-17 Nov. Reprinted in part in IRS 1989c (*which see*):91.
- (1987) "A Communication Model of Taxpayer Honesty," 9 *Law & Policy* 246.
- MASON, Robert, Lyle D. CALVIN, and G. David FAULKENBERRY (1975) *Knowledge, Evasion and Public Support for Oregon's Tax System*. Corvallis, OR: Survey Research Center, Oregon State University, Dec.
- McBARNET, Doreen (1990) "Compliance Without Control: Notes from a Study of Tax Avoidance." Presented at Conference on Tax Compliance and Tax Law Enforcement, University of Michigan, Ann Arbor, Dec.
- McGRAW, Kathleen M., and John T. SCHOLZ (1991) "Appeals to Civic Virtue Versus Attention to Self Interest," 25 *Law & Society Review* 471.
- (1988) "Taxpayer Adaptations to the 1986 Tax Reform Act," in Van Koppen, Hessing, and Van Den Heuvel 1988 (*which see*):105-25.
- McGRAW, Kathleen M., John T. SCHOLZ, and Marco STEENBERGEN (1989) "The Impact of Discussion on Taxpayer Responses to the 1986 Tax Reform Act. Presented at 1989 IRS Research Conference, Washington, DC, 16-17 Nov. Reprinted in part in IRS 1989e (*which see*):115.
- McKEE, Timothy C., and Monica D. GERBING (1989) "Taxpayers' Perceptions of the Fairness of the Tax Reform Act of 1986. Presented at 1989 IRS Research Conference, Washington, DC, 16-17 Nov. Reprinted in part in IRS 1989e (*which see*):99.
- MIKESELL, John L. (1986) "Amnesties for State Tax Evaders: The Nature of and Response to Recent Programs," 39 *National Tax Journal* 507.
- MILLIRON, Valerie C. (1985) "A Behavioral Study of the Meaning and Influence of Tax Complexity," 23 *Journal of Accounting Research* 794.
- NATIONAL ACADEMY OF SCIENCES (1984) "Proposal for a Panel on Research on Taxpayer Compliance Behavior." Committee on Research on Law Enforcement and the Administration of Justice, Commissioner on Behavioral and Social Sciences and Education, National Research Council, March.
- NATRELLA, Vito (1966) "Historical and Future Development of Statistics of Income," *Proceedings of the Business and Economics Statistics Section, American Statistical Association*.
- NORSWORTHY, John R. (1966) "A Theory of Taxpayer Behavior: Evasion of the Personal Income Tax." Ph.D. dissertation, University of Virginia.
- O'NEILL, David M. (1983) "Growth of the Underground Economy, 1950-81; Some Evidence from the Current Population Survey." Prepared for Joint Economic Committee, Congress of the United States (S. Prt 98-122, 9 Dec.).
- PARK, Rosemarie (1988) "A Survey of Readability and Comprehensibility of IRS Forms and Notices Intended for Low Income Adults." Presented at IRS Frank M. Malanga Memorial Research Conference, Washington, DC, 16-17 Nov. Reprinted in part in IRS 1989c (*which see*):169.
- PECARICH, Pamela, and Mel SCHWARZ (1989) "Minimizing Compliance Burdens." Presented at 1989 IRS Research Conference, Washington, DC, 16-17 Nov. Reprinted in part in IRS 1989e (*which see*):99.
- PENICK, Bettye K., and Maurice E. B. OWENS III (eds.) (1976) *Surveying Crime*. Washington, DC: National Academy of Sciences.
- REDISH, Janice C. (1988) "The Cognitive Burden: Simplifying the Taxpayer's Tasks." Presented at IRS Frank M. Malanga Memorial Research Conference, Washington, DC, 16-17 Nov. Reprinted in part in IRS 1989c (*which see*):141.
- RICE, Eric M. (1990) "The Corporate Tax Gap: Evidence on Tax Compliance by Small Corporations." Presented at Conference on Tax Compliance and Tax Law Enforcement, University of Michigan, Ann Arbor, Dec.
- ROBBEN, Henry S. J. (1991) *A Behavioral Simulation and Documented Behavior Approach to Income Tax Evasion*. Deventer: Kluwer.
- ROBBEN, Henry S. J., Paul WEBLEY, Russell H. WEIGEL, Karl-Erik WARNERYD, Karyl A. KINSEY, Dick J. HESSING, Francisco Alvira

- MARTIN, Henk ELFFERS, Richard WAHLUND, Luk van LANG-ENBOVE, Susan B. LONG, and John T. SCHOLZ (1990) "Decision Frame and Opportunity as Determinants of Tax Cheating: An International Experimental Study," 11 *Journal of Economic Psychology* 364.
- ROTH, Jeffrey A., John T. SCHOLZ, and Ann Dryden WITTE (eds.) (1989) *Taxpayer Compliance: Vol. 1, An Agenda for Research*. Philadelphia: University of Pennsylvania Press.
- ROTH, Jeffrey A., and John T. SCHOLZ (eds.) (1989) *Taxpayer Compliance: Vol. 2, Social Science Perspectives*. Philadelphia: University of Pennsylvania Press.
- SANDFORD, C. (1973) *The Hidden Costs of Taxation*. London: Institute for Fiscal Studies.
- SAWICKI, Phillip (ed.) (1983) *Income Tax Compliance: A Report of the ABA Section of Taxation Invitational Conference on Income Tax Compliance*. Washington, DC: American Bar Association.
- SAWYERS, Roby B. (1991) "The Impact of Uncertainty and Ambiguity on Income Tax Decision Making." Working Paper, North Carolina State University.
- SCHENK, Deborah H. (1990) "Eliminating Complexity for Individual Taxpayers: A Revenue Loser without a Constituency?" Presented at AICPA/ABA Invitational Conference on Reduction of Income Tax Complexity, Washington, DC, 11–12 Jan.
- SCHMIDT, Peter (1989) "Statistical Issues in Modeling Taxpayer Compliance," in Roth et al. 1989 (*which see*):App. A, 307–38.
- SCHOLZ, John T. (1989) "Compliance Research and the Political Context of Tax Administration," in Roth and Scholz 1989 (*which see*):12–46.
- SCHWARTZ, Richard D., and Sonya ORLEANS (1967) "On Legal Sanctions," 34 *University of Chicago Law Review* 274.
- SCOTCHMER, Suzanne (1989) "The Effect of Tax Advisors on Tax Compliance," in Roth and Scholz 1989 (*which see*):182–99.
- SHARP, Kevin (1989) "Taxpayer Perceptions and Misperceptions Regarding Tax Reform and the Tax System." Presented at 1989 IRS Research Conference, Washington, DC, 16–17 Nov. Reprinted in part in IRS 1989e (*which see*):95.
- SIMON, Carl P., and Ann Dryden WITTE (1980) "The Underground Economy: Estimates of GNP, Structure and Trends," in Joint Economic Committee, 5 *Government Regulation: Achieving Social and Economic Balance*. Washington, DC: Government Printing Office.
- SLEMROD, Joel (1989) "Complexity, Compliance Costs, and Tax Evasion," in Roth and Scholz 1989 (*which see*):156–81.
- SLEMROD, Joel, and Nikki SORUM (1984) "The Compliance Cost of the U.S. Individual Income Tax System," 37 *National Tax Journal* 461.
- SMITH, Kent W., and Loretta J. STALANS (1990) "Encouraging Tax Compliance with Positive Incentives: A Conceptual Framework and Research Directions." Presented at 1990 Internal Revenue Service Research Conference, Washington, DC, 15–16 Nov.
- SMITH, Marguerite T. (1991) "Who Cheats on Their Income Taxes," 20 *Money* 100.
- SPICER, Michael W., and Lee A. BECKER (1980) "Fiscal Inequity and Tax Evasion: An Experimental Approach," 33 *National Tax Journal* 171.
- STALANS, Loretta Jane, Karyl A. KINSEY, and Kent W. SMITH (1991) "Listening to Different Voices: Formation of Sanction Beliefs and Taxpaying Norms," 21 *Journal of Applied Psychology* 119.
- STALANS, Loretta Jane, Kent W. SMITH, and Karyl A. KINSEY (1989) "When Do We Think about Detection? Structural Opportunity and Taxpaying Behavior," 14 *Law and Social Inquiry* 481.
- STEENBERGEN, Marco, Kathleen McGRAW, and John SCHOLZ (1990) "Taxpayer Adaptation to the 1986 Tax Reform Act: Do New Tax Laws Affect the Way Taxpayers Think About Taxes?" Presented at Conference on Tax Compliance and Tax Law Enforcement, University of Michigan, Ann Arbor, Dec.
- STIGLER, George J. (1970) "The Optimum Enforcement of Laws," 78 *Journal of Political Economy* 526.
- SWINGEN, Judyth A. (1989) "Taxpayer Attitudes and Equity Perceptions af-

- ter the Tax Reform Act of 1986—New York Survey of Taxpayers." Presented at 1989 IRS Research Conference, Washington, DC, 16–17 Nov. Reprinted in part in IRS 1989e (*which see*):92.
- SWINGEN, Judyth A., and Susan B. LONG (1990) "The Impact of Paid Preparer Usage," *Proceedings of the Annual Meeting of the American Accounting Association (Southwest Region)*.
- (1989) "Filing Patterns and Problems on Federal Income Tax Returns, 1983–1987." Presented at annual meeting of American Accounting Association (Northeast Region), Albany, NY, April.
- (1988) "Mathematical and Clerical Errors during the 1987 Filing Season 1986 Returns," 39 *Tax Notes* 759.
- SZILAGYI, John (1990) "Where Some of Those Dependents Went." Presented at 1990 IRS Research Conference, Washington, DC, 15–16 Nov.
- (1989) "Where Did All the Dependents Go?" Presented at 1989 IRS Research Conference, Washington, DC, 16–17 Nov. Reprinted in part in IRS 1989e (*which see*):64.
- TOMASIC, Roman, and Brendan PENTONY (1990) "Defining Acceptable Tax Conduct: The Role of Professional Advisers in Tax Compliance." Discussion Paper No2/1990, Centre for National Corporate Law Research, University of Canberra, Australia.
- U.S. CONGRESS (1972) "U.S. Government Information Policies and Practices—Problems of Congress in Obtaining Information from the Executive Branch (Part 8)," *Hearings before a Subcommittee of the Committee on Government Operations, House of Representatives, 92d Congress, 2d Session*.
- U.S. JOINT COMMITTEE ON TAXATION (1983) *Background on Federal Income Tax Compliance* (June 21). Washington, DC: Government Printing Office.
- U.S. SENATE (1975) *Report on Administrative Procedures of the Internal Revenue Service to the Administrative Conference of the United States*. S. Doc. 94-266, Oct.
- U.S. TREASURY DEPARTMENT (1985) *Treasury Department Circular 230*.
- VAN KOPPEN, Peter, Dick J. HESSING, and Grat VAN DEN HEUVEL (eds.) (1988) *Lawyers on Psychology and Psychologists on Law*. Amsterdam: Swets & Seitlinger.
- VOGEL, Joachim (1974) "Taxation and Public Opinion in Sweden: An Interpretation of Recent Survey Data," 21 *National Tax Journal* 499.
- WEBB, Eugene J., Donald T. CAMPBELL, Richard D. SCHWARTZ, and Lee SECHREST (1966) *Unobtrusive Measures: Nonreactive Research in the Social Sciences*. Chicago: Rand McNally.
- WEBLEY, Paul, Henry S. J. ROBBEN, Henk ELFFERS, and Dick J. HESSING (1991) *Tax Evasion: An Experimental Approach*. Cambridge: Cambridge University Press.
- WESTAT, INC. (1980) *Individual Income Tax Compliance Factors Study*. Report, including separate executive summary, prepared under contract for the Internal Revenue Service, Rockville, Md. Washington, DC: Internal Revenue Service.
- WHITE, Michelle J. (1990) "Why Are Taxes So Complex and Who Benefits?" 47(3) *Tax Notes* 341.
- WIEGAND, Bruce, and Jacqueline BOYLES (1988) "Reality of Complexity vs. Perceived Complexity of IRS Forms and Instructions Based on a 20 Year Analysis of Media Coverage." Presented at IRS Frank M. Malanga Memorial Research Conference, Washington, DC, 16–17 Nov. Reprinted in part in IRS 1989c (*which see*):167.
- WITTE, Ann Dryden, and Diane F. WOODBURY (1985) "The Effect of Tax Laws and Tax Administration on Tax Compliance," 38(1) *National Tax Journal* 1.
- (1983) "What We Know about Factors Affecting Compliance with Tax Laws," in Sawicki 1983 (*which see*):133–48.
- WRIGHT, L. Hart (1970) *Needed Changes in Internal Revenue Service Conflict Resolution Procedures*. Chicago: American Bar Foundation.
- YANKOLOVICH, SKELLY, AND WHITE, INC. (1984) *Taxpayer Attitudes Study: Final Report*. Washington, DC: Internal Revenue Service.

CASES CITED

Commissioner v. Newman, 159 F.2d 848 (2d Cir. 1947).
Dobson v. Commissioner, 320 U.S. 489 (1943).
Long v. Internal Revenue Service, U.S.D.C. W.D. Wash. 1975.

STATUTES CITED

Family Support Act of 1988, Public Law 100-647.
Freedom of Information Act, 5 U.S.C. 552.
Tax Reform Act of 1986, Public Law 99-514.