FRAMING JUSTICE: TAXPAYER EVALUATIONS OF PERSONAL TAX BURDENS

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This study examines how taxpayers evaluate the distributive justice of personal income tax burdens. Using the concept of framing from behavioral decision theory, we suggest that taxpayers employ either an outcome-processing or a norm-processing frame of tax fairness evaluation. Framing is affected by substantive tax policies and the tax situations of individuals. Taxpayers who qualify for tax deductions and other tax preferences employ an outcome-processing frame and focus on perceived abuses of government power when evaluating fairness. Those unable to claim tax breaks employ a norm-processing frame and focus on vertical social comparisons and their inability to qualify for valued tax breaks. The findings suggest that tax avoidance policies have the net effect of increasing public perceptions of unfairness in the tax system.

INTRODUCTION

Distributive justice research focuses on how people evaluate the fairness of outcomes they and others receive in the course of financial, legal, and social interactions. According to most definitions, individuals form perceptions of distributive justice by comparing the outcomes of actors engaged in direct or indirect social transactions with some ideal or expected configuration of outcomes (e.g., Adams 1965; Crosby 1982; Homans 1974; Walster, Walster, and Berscheid 1978).

Theories of distributive justice assume that fairly complex perceptual and reasoning processes underlie justice evaluations. Experimental studies simplify the cognitive task of forming justice perceptions considerably by providing a structured environment that directs or elicits the research subjects' attention to particular

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¹ In contrast, procedural justice research focuses on evaluations of the processes by which decisions are made and outcomes allocated (Lind and Tyler 1988).

outcomes, reference transactions, and distribution rules (Wegener 1990).

In natural settings, however, the cognitive task of forming distributive justice perceptions is far less structured, taking on the character of an ill-defined problem (Camerer and MacCrimmon 1983). Existing research on distributive justice provides little guidance for understanding how people select and process justice-related information in a stimulus-rich environment. Research on behavioral decisionmaking suggests that because people are limited in their information-processing capacities, most individuals base their distributive justice perceptions on only one or two salient dimensions of the situation (Carroll 1987).

Our study utilizes the concept of "framing" from behavioral decision theory to explain how taxpayers evaluate the distributive justice of their personal income tax burdens. More specifically, we examine empirically the effects of taxpayer evaluations of specific tax distribution rules, their personal tax outcomes, and their choice of reference transaction on evaluations of personal tax fairness. We use the results of multivariate analyses of personal fairness evaluations to evaluate the extent to which different types of taxpayers use outcome-processing or norm-processing modes of fairness evaluation (Carroll 1987).

Tax distribution rules are operationalized in this study as tax-payer evaluations of the fairness of four federal income tax policies—(1) redistributing income through progressive tax rates, (2) providing social welfare subsidies by means of tax deductions and credits, (3) providing tax incentives for economic growth and capital investment, and (4) uniformly taxing different forms of labor income (Ekstrand 1980; Pechman 1977). Each of these policies affects the relative tax burdens of identifiable groups of taxpayers, making it possible to examine the effects of personal tax situations on evaluations of fairness.

Reference transactions refer to the economic transactions and social relationships that taxpayers focus on when evaluating personal tax fairness. We examine two potential reference transactions in this study. The citizen-government transaction centers on individual evaluations of the fairness of the direct exchange between citizens and their government. The rich-poor social comparison focuses on individual evaluations of the vertical equity of tax burdens.

Outcome- and Norm-processing Frames of Fairness Evaluation

Both behavioral decision theories and research on social cognition highlight the substantive impact of early stages of information processing on the eventual content of people's perceptions and decisions. Prospect theory emphasizes an initial editing stage that "frames" a situation and defines the reference points against

which behavioral alternatives will be evaluated (Kahneman and Tversky 1984). Likewise, researchers have found that cognitive schemas or scripts structure an individual's definition of the situation by directing attention to particular information, leading the individual to discount or ignore other data, and organizing information into meaningful patterns (Fiske and Taylor 1984).

Carroll (1987) suggests that two dominant and competing images of the choice process found throughout the social sciences are themselves examples of alternative frames that may be used to structure ill-defined problems. Outcome-processing models of choice assume that people focus on utilitarian considerations in making decisions, while norm-processing models view choice as grounded on people's normative beliefs about the legal rights and moral obligations of themselves and others (Carroll 1987: 321).²

Outcome-processing and norm-processing models of choice carry different perspectives on the nature of social relations and social order. In an outcome frame, relationships are perceived as direct social exchanges, while in a normative frame, social structure and social roles are emphasized. Self-interested individuals are influenced by costs and benefits in an outcome frame, but in the normative realm, role occupants are granted rights and are assigned duties. And while people pursue happiness in the outcome frame, they desire membership, status, and a sense of belonging in the normative scheme of things (Berger, Zelditch, Anderson, and Cohen 1972; Lind and Tyler 1988; Perin 1977; Tyler 1988).

The distinction between outcome- and norm-processing frames parallels different theoretical perspectives found in distributive justice research. Equity and exchange-based theories view individuals as rational, self-interested, and goal-oriented actors who evaluate justice in terms of the proportionality of outputs to inputs among the participants to an exchange (e.g., Adams 1965; Homans 1974; Walster et al. 1978). In this perspective, a fair distribution is one that rewards people according to their contributions toward producing outcomes. Critiques of equity and exchange theories emphasize their reductionism and argue that existing social structures of status and power play a key role in determining actual distributions of outcomes (e.g., Crosby and Gonzalez-Intal 1984; Martin and Murray 1983; Sampson 1986). In light of these critiques, Folger (1984) distinguishes between an "exchange orientation" to distributive justice that focuses on two-way exchanges and a "distributivepattern orientation" that focuses on whether the overall pattern of outcomes conforms to some normative standard of what seems proper, good, and fair.³

² The difference is analogous to the distinction in moral philosophy between teleological systems of ethics that focus on the good and deontological systems that focus on the right (Etzioni 1988; Niebuhr 1963; Rabinowitz, Karuza, and Zevon 1984).

³ It could be argued that all distributive justice research should be classi-

Framing and Reference Transactions

Kahneman, Knetsch, and Thaler (1986) use the term "reference transaction" to describe the comparison economic transaction against which the fairness of firm pricing and wage-setting behavior is evaluated. Their results indicate the importance of context in shaping perceptions of distributive justice. For example, respondents consider it fair for a firm to respond to an increased labor supply by offering lower wages to newly hired workers. But respondents also believe it is unfair for a firm to lower the wages of current employees in response to the same labor market conditions. In the first instance, fairness evaluations appear to reflect an outcome-processing approach that emphasizes the entitlement of firms to seek profits in the marketplace. In the latter case, fairness is judged according to normative standards about the entitlement of individuals to the terms of previous transactions with the firm (see also Blau 1964).

In the context of income taxation, individuals may focus on evaluating the fairness of tax burdens in terms of the amount of taxes they pay relative to benefits they receive from government. Scott and Grasmick (1981) use the term "exchange equity" to refer to this conceptualization of tax fairness (see also Mason and Calvin 1978; Porcano 1988). Public choice theories in political science likewise employ an exchange framework in that they assume that individuals trade their support for government and political leaders in exchange for valued government programs and benefits (Kinder and Sears 1985; Tyler, Rasinski, and Griffin 1986).

These lines of research suggest that a focus on the citizen-government transaction will signal an outcome-processing frame of tax fairness evaluation. An important element of citizen evaluations of exchanges with government is whether the government is believed to be a reasonable bargaining partner, one that refrains from using its coercive powers to impose excessive revenue demands (Levi 1988). In this study, we use beliefs that the government taxes all citizens too much as an empirical indicator of perceived unfairness in the citizen-government transaction. Although this operationalization is quite broad, it does capture the degree to which the government as an actor is perceived as exploitive.⁴

fied as norm processing because justice evaluations involve the comparison of outcomes with some standard or distribution rule. Tyler, Rasinski, and Griffin (1986) appear to use this criterion when discussing alternative images of citizens found in research on political psychology. We classify equity and exchange theories of distributive justice as outcome-processing models because they explicitly state utilitarian assumptions about human nature (see, e.g., Walster et al. 1978), view social interactions as exchanges, and include cost/benefit analyses as an essential step in the process of justice evaluation. Although there is a normative component to justice evaluation in these theories, norms of justice are themselves viewed as arising from and being maintained by utilitarian considerations.

⁴ Other variables included as controls (trust in government and support for welfare programs) could also be construed as focusing on the citizen-gov-

Income taxation also involves indirect transactions among tax-payers that are mediated by government. Tax laws, rules, and regulations create different legal rights and obligations for citizens occupying different social and economic niches in our society. Tax laws are rarely based on a strong social consensus, though, and individuals may perceive the resulting allocations of tax burdens and benefits as unfair (Yankelovich, Skelly, and White 1984; Harris, Inc. 1987). These considerations suggest that those who focus on social comparisons among taxpayer groups when evaluating personal fairness are employing a norm-processing approach to fairness evaluation. We focus in this study on vertical social comparisons of the relative tax burdens of higher- and lower-income taxpayers, which we refer to as the "rich-poor" social comparison (see also Hamill, Lodge, and Blake 1985).

A taxpayer's evaluation of the fairness of each reference transaction does not indicate whether the taxpayer is using a norm- or outcome-processing approach to evaluating personal tax burdens. Instead, it is the relationship between measures of each reference transaction and perceptions of personal tax burdens that will identify the type of reference transaction underlying the tax justice evaluations made by different types of taxpayers. We argue that a strong relationship between evaluations of the citizen-government transaction and personal tax burdens points to an outcome-processing frame of fairness evaluation. Similarly, a strong relationship between evaluations of the rich-poor comparison and personal tax burdens suggests a norm-processing frame of reference.

Framing and Tax Policy Evaluations

Federal income tax policies articulate various, and sometimes conflicting, societal distribution rules regarding the allocation of tax burdens. Individual tax policies cannot be easily classified a priori as evoking either outcome- or norm-processing standards of judgment among individuals. For example, positive evaluations of the fairness of mortgage interest deductions may reflect support for a goal of stimulating housing construction (outcome processing), but they may also reflect a belief that homeowners have a right to housing subsidies (norm processing). It is possible, however, to infer whether particular tax policies evoke an outcome- or norm-processing frame of evaluation by examining the sign of the effects of policy evaluations on personal fairness judgments.

Public choice models of political disaffection argue that people become alienated when government policies and actions are incon-

ernment exchange and reflective of outcome-processing modes of fairness evaluation. Our decision to include them as controls for other, potentially confounding processes of perception formation results in a conservative estimation of the influence of outcome-processing considerations on evaluations of personal tax burdens.

gruent with their personal preferences and values (Wright 1981). This suggests that an outcome-processing approach to tax fairness evaluation will be marked by a negative relationship between perceived policy fairness and personal tax burdens. That is, those who believe the government provides fair and reasonable tax policies will be less likely to perceive unfairness in their own personal tax burdens.

Relative deprivation theory provides a norm-processing perspective that points to a different relationship between perceived policy fairness and personal tax burdens. Common to many relative deprivation models is an assumption that people must desire, expect, or value something before they can feel unfairly deprived of it (see Crosby 1982:23). This suggests that taxpayers who value, but do not attain, the behaviors and statuses treated favorably by tax policy will be more likely to experience feelings of deprivation. To the extent, then, that evaluations of specific tax policies reveal personal aspirations and desires, one would expect a positive interaction to occur between taxpayer ratings of a policy's fairness and relative tax liability under that policy in statistical analyses of the perceived unfairness of personal tax burdens.

An expected utility version of an outcome-processing model also predicts a significant interaction effect between policy evaluations and personal tax liability, but one with a negative sign, reflecting a different pattern of results. According to an expected utility model, the most disgruntled taxpayers would be those with higher tax liabilities who believe the policy is unfair. In a relative deprivation model, the most disgruntled taxpayers would be those who value the policy but do not benefit from it.

The Four Tax Policies

The scholarly literature often conveys an image of the public as uninformed on the issues and reporting attitudes that are unstable and vacuous (Converse 1964, 1970). Several recent studies of political attitudes, however, indicate that individuals develop hierarchical belief structures that allow them to process and retrieve meaningful attitudes toward policy stimuli (Hurwitz and Peffley 1987; Rasinski 1987). Moreover, income taxation may be a particularly advantageous domain for examining the effects of policy beliefs among the general public. More than 100 million individual income tax returns are filed each year, indicating considerable citizen involvement with tax issues (Smith and Kinsey 1987; Carroll 1987).

Nevertheless, an important first step in our analysis will be to describe and examine the structure of tax policy evaluations. In a sense, the first question we ask is whether the general public maintains the same hierarchical organization of policy attitudes held by the authors of this article. We began developing our policy

measures by identifying four general tax policies and then wrote survey questions about specific tax provisions we believed reflected the implementations of the four general policies. The four policies, analogous to what Hurwitz and Peffley (1987) describe as general policy postures, involve using the income tax system to achieve certain social and economic goals.

Tax Subsidies

The federal income tax system provides a variety of social welfare benefits in the form of tax subsidies for personal expenses such as mortgage interest, medical care, theft and casualty losses, state and local taxes, and charitable contributions. Many of these expenses are reported as itemized deductions on Schedule A of the 1040 tax forms. Taxpayers typically qualify to itemize deductions when they add a large deductible, such as home mortgage interest, to their portfolio of personal expenses.

Progressivity

The progressive marginal rate structure of income taxation is based on the "ability to pay" principle. According to this principle, the cost of government should be borne primarily by citizens who can most afford it, irrespective of the benefits they receive (Spicer 1974). Progressive tax structures redistribute income by decreasing after-tax income differentials between high- and low-income citizens (Hawthorne and Jackson 1987).

Economic Incentives

The U.S. income tax system from its inception has provided tax incentives for capital formation and business investment (Pechman 1977; Hawthorne and Jackson 1987). Losses from business activities and capital investments can be written off, and some forms of investment income can be excluded from taxation, taxed at lower rates, or deferred to a later date for taxation. Economic incentives tend to undermine progressivity because wealthier taxpayers usually have more capital available for investment than do lower-income taxpayers.

Uniform Taxation of Labor Income

In contrast to capital income, the tax system requires the uniform taxation of cash income from labor, whatever its source. Many taxpayers, however, do not believe that income from secondary sources of income, such as tips and odd jobs, should be taxed the same way as wages and salaries (Ekstrand 1980; Yankelovich, Skelly, and White 1984).

DATA COLLECTION AND ANALYSIS

The data were collected in the spring of 1985 as part of an omnibus survey of Oklahoma City residents conducted annually by the Department of Sociology of the University of Oklahoma. A simple random sample of the names of 360 adults (18 and older) was drawn from the R. L. Polk Directory for the city. Initial contact was made in the form of a letter briefly describing the nature of the survey and indicating that a member of the research team would soon try to schedule an appointment with the person. Attempts to schedule appointments were made in person by trained field supervisors and interviewers. About 60 percent of the names initially drawn from the Polk Directory resulted in completed interviews. Among the other 40 percent, about a fifth resulted in undeliverable letters, and the remainder could not be located or refused to participate. Replacements were chosen at random until the target sample size of 360 interviews was achieved. Thirty-three cases had missing values, leaving a sample of 327 cases.

The characteristics of respondents in the survey were compared to 1980 Census data for the city for percentage female, percentage white, and mean age. For none of these comparisons did the sample differ significantly from the population. Use of names in the *Polk Directory* probably results in the undersampling of recent movers whose listing was no longer accurate by the time the *Directory* was in print.

Variable Measurement and Construction

Dependent Variable

Perceived Personal Tax Unfairness. The dependent variable assessed respondents' evaluations of whether they believe they are paying more or less than their fair share of taxes. One question in the survey asked respondents to rate whether people like them pay too much or too little in taxes, relative to what their fair share should be, using a five-point scale with a midpoint of "about right." Two other questions used the same scale to ask about perceptions of personal tax burdens, in light of the amount of money they have left after taxes, and considering all the federal government is expected to do. These items are highly intercorrelated (alpha=.87), and were averaged to form a scale of perceived personal unfairness (see Appendix).⁵ On average, 14 percent indicated they paid "far too much," 54 percent "too much," 28 percent "about right," and only 5 percent indicated they paid too little in taxes. The generally negative evaluation of personal tax burdens contrasts sharply with

⁵ The wording of the last two items reflects an unsuccessful attempt to write survey questions that would differentiate between need and equity distribution rules (Deutsch 1975). All three items are included in the personal unfairness scale because of their high intercorrelations and because they show similar patterns of correlations with other variables.

the common research finding that people tend to perceive fairness in their personal life situations (Crosby 1982; Lerner and Miller 1978).

Independent Variables

1. Perceived Policy Fairness. Data collection occurred shortly before the Tax Reform Act of 1986 was first proposed, and policy questions therefore reflect tax provisions under the old law. Questions on tax subsidies covered five types of deductible expense (see Appendix). The economic incentives questions tapped the perceived fairness of tax laws regarding three types of investments. Four questions covered the uniform taxation of labor income, asking about the fairness of taxing various forms of cash, secondary, or imputed income the same as wages and salaries. Finally, one question assessed the perceived fairness of progressive marginal tax rates.

Table 1 reports the results of a factor analysis of all of the policy questions, using an oblimin rotation (delta set to 0). The factor pattern indicates that respondents organize their tax policy evaluations into the same kind of general postures recognized by tax analysts and used by the authors in developing the survey questions. Four distinctive and coherent factors emerge, accounting for 66 percent of the variance. The weak correlations among factors (see bottom of Table 1) indicate that respondents tend to "morselize" their policy evaluations (Lane 1962), rather than evaluate them within an overarching ideological framework or tax schema (Converse 1964; Sears and Citrin 1982).

Summary scales for the policy evaluations were constructed by averaging the relevant items for each policy for which there were valid responses.⁶ The means, standard deviations, and alpha coefficients for these and other variables are reported in the Appendix.

2. Personal Tax Situation. Personal tax situation refers to indicators of the effects of individual tax policies on personal tax liabilities. These variables reflect the intersection of specific public policies with individual lifestyles. Although these types of variables are sometimes used to operationalize self-interest, we avoid such terminology because it assumes an outcome-processing model, while relative deprivation could produce the same pattern of results.

⁶ We chose to minimize missing values in scale construction to reduce attrition in sample size. No single policy question has more than 6 percent missing values, but 24 percent of cases have missing values on one or more policy questions. Factor analyses using both pairwise correlations and mean substitution for missing values yielded the same basic factor structure as that reported in Table 1. In addition, restricting the case base to respondents with no missing data on policy questions does not appreciably change the results of other analyses reported in this article.

Table 1. Factor Analysis of Policy Evaluations, Oblimin Rotation

	Factor			
	1	2	3	4
A. Factor Loadings				
Tax subsidies for:				
Medical expenses	.63	.19	.03	.33
Property taxes	.86	.00	.00	08
Interest on debt	.88	10	.00	14
State/local taxes	.86	.09	.04	11
Contributions to charity	.63	17	16	.16
Uniform taxation of:				
Tip income	.03	.83	04	16
Income from odd jobs	02	.83	.00	02
Use of company car	.00	.58	.09	.26
Income from bonuses	04	.78	11	12
Economic incentives:				
Capital rate preferences	13	.04	—.83	02
Retirement income deferrals	.07	.39	51	.14
Tax shelter investments	.16	08	77	03
Progressivity:				
High-income pay higher rates	06	09	.00	.93
B. Correlations among Factors				
Tax subsidies	_			
Uniform labor tax	.00	_		
Economic incentives	23	23	_	
Progressivity	.11	.11	.02	_

The personal tax situation variables are coded so that a low score reflects, ceteris paribus, a relatively lower tax liability from a given tax policy, while a high score reflects a comparatively higher tax liability. Because mortgage interest is an expense that often triggers use of Schedule A, renters tend to have relatively higher tax liabilities under the policy of providing tax subsidies than do homeowners. About one-fourth of the respondents (28 percent) indicate that they rent their home, while the remainder report that they own their residences. Household income serves as the indicator of the personal impact from the policy of progressive marginal tax rates, with higher-income respondents tending to face higher tax rates.7

Personal benefit from economic incentives is based on whether respondents indicate receiving any income from rental property, capital gains, dividends, or self-employment. About 46 percent of respondents are classified as noninvestors from this information. Likewise, those who indicate they received income from a second job on the side or income from tips or commissions (30 percent) are coded as being personally affected by the policy of

⁷ Regression substitution was used to estimate household income for the 6 percent of cases with missing values on this variable (see Appendix). A lognormal transformation was used in most analyses, while a dummy variable based on a median split of household income was used in tests of interaction effects.

uniform labor taxation. We refer to this variable as "extra labor income."

Research on political psychology generally finds only modest relationships between these types of demographic variables and political preferences, including voting choices on tax referenda (Rasinski and Rosenbaum 1987; Sears and Citrin 1982; Sears, Lau, Tyler, and Allen 1980). The correlations in this study between each of the policy evaluations and its related situational variable are consistent with prior findings. Rental occupancy correlates -.16~(p<.01) with evaluations of tax subsidies; receipt of extra labor income correlates -.09~(p<.06) with evaluations of uniform labor taxation; and the log of household income correlates -.15~(p<.01) with evaluations of progressivity. A stronger correlation of -.30~(p<.0001), however, is observed between the dummy variable for noninvestors and evaluations of economic incentives.

3. Reference transactions. Respondents were asked to evaluate the distributive justice of federal income tax burdens for eight different types of taxpayers. As the frequencies in Table 2 indicate, respondents perceive sharp divisions in the distributive fairness of the tax system, and these tend to be organized in terms of income and capital investment. The modal responses are that large corporations, investors, and high- to upper-income families pay too little in taxes. In contrast, workers, small businesses, and low- to middle-income families are generally perceived as paying too much in taxes.

Responses to these questions were used in constructing both of the reference transaction measures. The perceived unfairness of the rich-poor comparison is operationalized by calculating the standard deviation of each respondent's answers to the set of questions for which the respondent gave valid answers. A high standard deviation indicates that respondents make strong distinctions between "haves" and "have nots" when evaluating the distribution of tax burdens across different kinds of taxpayers.⁹

 $^{^8}$ Correlations of renter status with the component items are consistent with the assumption that homeownership affects the likelihood of filing Schedule A. Rental occupancy is significantly correlated with the item on property taxes $(r\!=\!-.17,\,p\!<\!.01)$ and the item on interest expenses that lists mortgage interest as an example $(r\!=\!-.15,\,p\!<\!.01).$ Of the remaining items, the renter variable is correlated with the item on local sales and income tax deductions $(r\!=\!-.22,\,p\!<\!.001),$ but not the ones on large medical expenses and charitable deductions. Charitable contributions could be claimed without filing Schedule A in 1985, and taxpayers with large medical expenses would likely qualify for itemizing deductions regardless of housing status, so it is not surprising to find no differences between renters and homeowners for these two items.

⁹ Conceptually, this measure does not define which groups of taxpayers are classified as "haves" or "have nots." However, only six respondents rate higher-income groups, on average, as paying more than their fair share while simultaneously rating lower-income groups as paying too little or about the right amount.

	Percent Responding ^a					
	Pays Far Too Much	Pays Too Much	Pays About Right	Pays Too Little	Pays Far Too Little	Don't Know
Large corporations and businesses	3	3	19	38	35	7
Small businesses and self-employed people	11	33	42	7	2	5
Workers whose primary income is in wages and salaries	26	48	22	2	1	1
People who make a lot of their money from investments	3	10	24	37	16	10
Lower-income families earning less than \$15,000 a year	23	46	20	5	1	5
Middle-income families earning from \$15,000 to \$50,000 a year	10	47	38	3	0	2
Higher-income families earning from \$50,000 to \$100,000 a year	3	10	21	44	16	6
Upper-income families earning over \$100,000 a year	4	6	10	31	42	7

Table 2. Perceived Fairness of Tax Burdens for Eight Categories of Taxpayers

The perceived fairness of the citizen-government transaction is operationalized by calculating respondents' average rating of tax burdens across taxpayer groups. A high score indicates beliefs that the government taxes everyone too much, not just selected groups. Both measures were converted into z-scores to allow the direct comparison of unstandardized coefficients in analyses of interaction effects.

The two reference transaction measures are themselves correlated r=-.32, p<.0001), indicating that respondents who believe the government taxes too much are less likely to perceive inequities in the distribution of tax burdens across groups of taxpayers. ¹⁰ This suggests that competing values of economic individualism and

^a Question wording: "Each of these categories of taxpayers pays some share of the total amount of money the Government collects in income taxes. I'm going to read you a list of different kinds of taxpayers. Basing your opinion on what you know and have heard, tell me if you think each pays too much, too little, or about the right amount in terms of what its fair share should be."

 $^{^{10}}$ The frequency distribution of the rich-poor social comparison measure shows a sizable gap between the minimum possible score of 0 and the next highest score of .32. Six of the ten respondents who give all groups the same fairness rating also indicate that government taxes everyone too much. Their responses contribute substantially to the observed negative correlation between the two reference transaction; when they are excluded from the analysis the correlation drops to $-.22\ (p<.001).$ We decided to retain these respondents because their answers appear substantively meaningful. Dropping them produces weaker effects in some analyses for the citizen-government transaction but does not change the basic pattern of results.

egalitarianism may underlie respondents' evaluations of reference transactions (Rasinski 1987). The patterns of correlations with policy variables are also consistent with this interpretation. Respondents who evaluate economic incentives positively are less likely to perceive inequities between high- and lower-income taxpayers $r=-.36,\ p<.0001$). Likewise, those who believe progressive tax rates are fair are less likely to believe that the government taxes too much $r=-.25,\ p<.0001$).

Control Variables

Demographic variables of education (in years) and age (divided by 10) are included in analyses as control variables. Also, two behavioral and three attitudinal variables are included as controls for other potentially confounding processes of perception formation. The behavioral variables control for justification effects, because current fairness perceptions may simply be rationalizations for prior tax behaviors (Thurman, St. John, and Riggs 1984). To control for this possibility, self-reports of cheating on taxes in the previous five years are included, as well as the amount of effort devoted in the previous three years to planning financial affairs to avoid taxes legally.

Similarly, evaluations of tax policies and the distributive justice of taxation may reflect little more than a global sense of political support for or alienation from government. At least two panel studies have found that prior general attitudes toward government shape justice perceptions in legal settings (Tyler 1990; Tyler, Casper, and Fisher 1989). To control for this, three variables measuring political attitudes are included as control variables: trust in government, a sense of political voice, and support for federal public welfare programs (see the Appendix for variable construction). The political voice measure is used as an indicator of the procedural justice of the political process (Tyler, Rasinski, and Spodick 1985), although it does not measure specifically the procedural justice of the tax system.

Analysis of Perceived Personal Tax Burdens

Table 3 presents the results of a multiple regression analysis of respondents' perceptions of the distributive fairness of their own taxes. The results indicate that overall the two reference transactions have moderately strong and roughly equivalent effects on taxpayer evaluations of the unfairness of their personal tax burdens.

The results for policy variables are more complex. As noted before, an outcome-processing model would predict that the more favorably taxpayers evaluate the fairness of existing tax policies, the less likely they will believe that they pay more than their fair share of taxes. The expected negative relationships are indeed

Table 3.	Multiple Regression	Analysis	of Personal	Tax	Unfairness	(Standardized
	Coefficients)					

	Personal Tax Unfairness
Unfairness of reference transactions:	
Government-citizen	.38***
Rich-poor comparison	.43***
Perceived policy fairness:	
Progressivity	05
Uniform labor taxation	1 3*
Tax subsidies	.12*
Economic incentives	.18***
Personal tax situations:	
Renter	03
Noninvestor	.06
Log income	.09
Extra labor income	.12*
Control variables:	
Age/10	08
Education	12 *
Past cheating	06
Past avoidance	.00
Support for welfare	12**
Trust in government	05
Political voice	19***
R^2	.40

^{*} p < .05 ** p < .01 *** p < .001

found for two of the tax policies, uniform labor taxation and progressivity, although only the effect for uniform labor taxation is statistically significant. The results for the two other policies, tax subsidies and economic incentives, are both significant, but in a direction opposite to that predicted by an outcome-processing model of fairness evaluation. For both policies, positive evaluations of policy fairness increase the perceived distributive unfairness of one's own tax burden.

The observed positive effects of policy evaluations on perceived personal tax burdens for two of the policies are consistent with a relative deprivation interpretation of tax fairness evaluation. However, a more complete test of the relative deprivation model would predict a positive interaction between each policy evaluation and its related situational indicator of personal tax liability. That is, nonbeneficiaries who believe the policy is fair will perceive higher personal tax burdens. Table 4 describes the results of four analyses that examine interactions for each of the four tax policies between policy evaluations and personal tax situations. In each analysis, interaction terms with the relevant personal tax situation were computed for all independent variables in the equation. These analyses in essence test for differences in the effects of policy evaluations between two parallel regression models: one for respondents who have relatively lower tax liabilities as the result of that policy and another for those who have relatively higher tax liabilities.

Personal Tax Unfairness Strength of Effect Sign of Lower Higher Interaction Liability Liability Effect Analysis 1: Owners vs. Renters^a Tax subsidies .05 Rich-poor comparison .28 .33 Government-citizen transaction .29 .12 Analysis 2: Investors vs. Noninvestors Economic incentives .02 .31 Rich-poor comparison .23 .37 Government-citizen transaction .32 .16 Analysis 3: Low vs. High Income Progressivity .03 -.06 Rich-poor comparison .36 .21 .29 Government-citizen transaction .17Analysis 4: None vs. Some Extra Labor Uniform labor taxation -.06 -.13Rich-poor comparison .28 .32

Table 4. Interactions of Each Personal Tax Situation with Related Policy
Evaluation and Reference Transactions (Unstandardized Coefficients)

.20

.28

Government-citizen transaction

Analysis 1 compares for homeowners and renters the effects of respondent evaluations of the fairness of tax subsidies on the perceived unfairness of personal tax burdens. The second analysis compares the effects of support for economic incentives between investors and noninvestors, the third focuses on evaluations of progressivity among low- versus high-income respondents, while the fourth compares the effects of uniform labor taxation on perceived personal burdens of respondents with and without extra labor income. Results for the two reference transactions are also reported as a first step in examining whether different groups of taxpayers attend to different social relationships when evaluating personal unfairness.

Table 4 shows clear support for the relative deprivation hypothesis for the policy of providing tax subsidies and for the policy of providing tax incentives for economic investment. In both analyses, the sign of the interaction effect between the individual's personal tax situation and the related tax policy is both positive and statistically significant. Thus, for example, Analysis 1 shows that favorable evaluations of tax subsidies increase perceptions of personal tax burdens for renters more than homeowners. Likewise, the positive effect of evaluations of economic incentives on perceptions of personal unfairness is stronger among noninvestors than investors. In contrast, the signs of the interaction effects between income and progressivity and between extra labor income and uniform labor taxation are consistent with the predictions of an ex-

^a First group listed in each analysis has lower relative tax liability compared to second group under the given policy.

^{*}Interaction effect p < .05

^{**}Interaction effect p < .01

pected utility model, but neither interaction reaches conventional levels of statistical significance.

The results also suggest selective attention by different groups of taxpayers when they choose reference others in forming perceptions of personal tax justice. The clearest example occurs in comparisons of investors and noninvestors. Noninvestors evaluate the fairness of their own situations more in terms of the rich-poor reference transaction, while investors focus more on the citizen-government transaction. Likewise, lower-income respondents focus more on social comparisons between rich and poor. Two other interaction effects have significance levels that approach (p < .07) but do not reach conventional levels of statistical significance. Renters show a trend toward relying less than homeowners on evaluations of the government-citizen relationship when evaluating tax burdens. Likewise, high-income taxpayers focus more on perceptions of the government-citizen transaction than do low-income respondents when evaluating tax burdens.

The interaction analyses in Table 4 control for other potential differences between each set of comparison groups in examining the interactions between specific policy evaluations and their related situational indicators of relative tax liability. However, homeownership, investment status, income, and extra labor income are all intercorrelated; the results could be dominated by one or a combination of these personal tax situation variables.

To try to disentangle the various influences of personal tax situations on strategies of fairness evaluation, we begin with income. Higher-income taxpayers in theory face higher marginal tax rates under a progressive system, but higher income also provides resources for making the kinds of spending and investment decisions that allow one to lower taxes legally. Also, since the value of tax deductions is based on marginal tax rates, each dollar of tax deduction is worth more to higher-income taxpayers than to those with lower incomes. Not surprisingly, high-income respondents report greater legal tax avoidance: over two-thirds (64 percent) report at least some effort to arrange their finances to lower taxes legally, compared to 37 percent of low-income respondents. Also, about three-fourths (72 percent) of high-income respondents report receiving income from investments, compared to 36 percent of lowincome respondents. Likewise, 88 percent of high-income respondents are homeowners, compared to 45 percent of low-income respondents.

Table 5 disaggregates the sample into low- and high-income categories, using a median split of household income. The tax policy and reference transaction variables are also grouped according to whether previous results indicate a norm- or outcome-processing strategy of fairness evaluation. The rich-poor reference transaction and evaluations of tax subsidies and economic incentives are used to indicate norm-processing frames of fairness perception. In-

Table 5. Multiple Regression Analyses of Personal Tax Unfairness, Disaggregated by Income (Unstandardized Coefficients)

	Personal Tax Unfairnes		
	Low Income	High Income	
I. Regression Analysis			
Norm-processing indicators:			
Tax subsidies	.18*	.12	
Economic incentives	.30***	.04	
Rich-poor social comparison	.35***	.22***	
Outcome-processing indicators:			
Progressivity	.03	06	
Uniform labor taxation	09	12 *	
Government-citizen transaction	.17**	.29***	
Personal tax situations:			
Renter	.00	07	
Noninvestor	.08	.11	
Extra labor income	.16	.22*	
Control variables:			
Age/10	05	02	
Education	03	02	
Past cheating	25*	.04	
Past avoidance	01	.04	
Support for welfare	04	15**	
Trust in government	09	05	
Political voice	14** *	−.15*	
Adjusted R^2	.42***	.42***	
II. Usefulness Analysis ^a			
Norm-processing indicators	.28***	.08***	
entered last			
Outcome-processing indicators entered last	.04**	.25***	

^a Adjusted R^2 s are used in calculating usefulness. *p < .05 **p < .01 ***p < .001

dicators of outcome processing include the government-citizen reference transaction and evaluations of progressivity and uniform labor taxation.¹¹ The second part of the table also reports the results of a usefulness analysis comparing the unique contributions of norm-processing and outcome-processing indicators to perceptions of unfair personal tax burdens.

To begin, it is worth noting that high- and low-income respondents do not differ significantly in their mean perceptions of unfairness in their own tax burdens (t=-.68, p=.495). The results of the disaggregated analysis also show that the basic model accounts for the same amount of variance (adjusted $R^2=.42$) in both low-and high-income respondents. But they also show that different cognitive processes underlie the distributive justice perceptions held by taxpayers of differing income levels. Norm-processing indicators contribute about 28 percent of the variance in perceived tax burdens among low-income respondents, and only 8 percent

Coefficients for reference transactions are slightly different from those in Table 4 because income itself is not included in the regression analyses reported in Table 5. Including income in the analyses reported in Tables 5 and 6 does not change the pattern of results.

Table 6.	Analyses Disaggregated by Income, Homeownership, ar	$^{\mathrm{nd}}$
	Investments (Unstandardized Coefficients)	

	Low Income		High Income		
	Both	Either	Neither	Both	Either/
	Own &	Own or	Own nor	Own &	Neither Own,
	Invest	Invest	Invest	Invest	Invest
I. Regression Analyses:					
Norm-processing indicators	:				
Tax subsidies	02	.00	.35*	.10	.22
Economic incentives	.14	.26***	.46**	.04	.03
Rich-poor comparison	.19	.43***	.32**	.21***	.36***
Outcome-processing indicat	ors:				
Uniform labor taxation	25*	07	33*	09	13
Gov't-citizen transaction	.23	.21**	.09	.36***	.24**
Control:					
Political voice	02	16*	28*	17*	20*
Adjusted R^2	.25*	.45***	.49***	.37***	.43***
II. Usefulness Analysis ^a					
Norm-processing indicators	.02	.30***	.41***	.09**	.14**
entered last					
Outcome-processing	.17*	.08**	.05*	.33***	.09**
indicators entered last					
III. Descriptive Statistics ^b					
(N of cases)	(37)	(78)	(51)	(106)	(55)
Means of:	(31)	(10)	(51)	(100)	(33)
Personal tax unfairness	.70	.82	.80	.82	.87
Gov't-citizen transaction	42	0 4	07	.33	22***
Rich-poor comparison	.13	.06	.32	35	.23***
Support for welfare	2.80	2.94	3.18	2.50	2.72***
spending	2.00	2.01	0.10	2.00	2.12
Political voice	2.41	2.55	2.30	2.74	2.40**
Education (in years)	12.90	13.30	12.60	15.40	14.60***
Household income	19.89	18.51	15.76	62.25	45.62***
(\$1,000s)	10.00	10.01	200	32.20	20.02
Legal avoidance effort	2.02	2.05	1.90	2.84	2.38***
Correlation of rich-poor &	16	15	16	44** *	16
gov't-citizen transaction	.10	.10	.10	•••	.20

^a Adjusted R^2 s are used in calculating usefulness.

for high-income taxpayers. Conversely, outcome-processing indicators contribute 25 percent of the variance for high-income respondents and only 4 percent for those with lower incomes.

Table 6 disaggregates the sample even further by subdividing high- and low-income groups into whether the respondent qualifies for both, either, or neither of the tax reduction opportunities offered by the policies of providing tax subsidies and incentives for investment. Only nine high-income respondents qualify for neither and are therefore grouped with those who qualify for only one. Because of the reduced number of cases, multiple regressions and the usefulness analyses are limited to six independent variables to conserve degrees of freedom. These include three policy evaluations (tax subsidies, economic incentives, and uniform labor taxation)

^b Significance levels for descriptive statistics refer to the results of a one-way analysis of variance across all five categories of taxpayers.

^{*}p < .05 **p < .01 ***p < .001

and the two reference transactions. Political voice is included to control for potentially confounding effects of procedural justice evaluations on policy and distributive justice evaluations (Lind and Tyler 1988; Tyler, Rasinski, and Spodick 1985; Tyler 1990). It also is a control variable that consistently and significantly shaped perceived personal unfairness in earlier analyses.¹²

Although income affects the likelihood that a respondent will be able to qualify for tax subsidies and economic incentives for investments, income by itself does not account for the use of norm-versus outcome-processing frames of reference. As Table 6 shows, whatever their income level, respondents who are both homeowners and investors are more likely to rely on outcome-processing strategies of fairness evaluation. However, outcome-processing indicators account for about twice as much variance in perceived unfairness among high-income owners/investors (33 percent of variance) than among owners/investors with lower household incomes (17 percent).

The usefulness analysis also indicates that low-income respondents who do not benefit from either tax subsidies or economic incentives are more likely to use norm-processing strategies of fairness evaluation. About 40 percent of the variance in perceived unfairness is explained by norm-processing indicators for respondents who benefit from neither policy and 30 percent for those who benefit from only one of the policies.

The results for high-income respondents who do not qualify for both types of tax benefits are in the same direction as those for low-income nonrecipients, but at the same time are sharply attenuated. Only 14 percent of the variance can be attributed uniquely to the norm-processing variables, which is only a little higher than the 9 percent attributable to the outcome-processing indicators. The results for evaluations of tax subsidies reach only a borderline significance (p < .10), and evaluations of economic incentives have no discernible effect on perceived personal unfairness. The weakness of relative deprivation effects for specific tax policies in this group is not surprising, because failure to qualify for tax breaks is probably more a matter of choice than affordability for these respondents.

The results also suggest that use of the rich-poor reference transaction in evaluating personal tax unfairness is more a function of personal tax situation than income. At both income levels, investor/homeowners are less likely than other respondents to base their personal fairness judgments on social comparisons between rich and poor. Use of the government-citizen transaction, though, appears to be affected by both income and qualification for

Allowing the stepwise entry of other significant variables from the basic model does not change the pattern of results obtained from the six-variable model.

tax breaks. Both categories of high-income respondents are more likely to rely on their perceptions of the government-citizen reference transaction when evaluating fairness than any of the low-income categories. Within income levels, though, the trend is for owners/investors to rely more on perceptions of the government-citizen transaction in forming personal fairness evaluations. The respondents who are least likely to base their fairness evaluations on the citizen-government transaction are low-income respondents who are neither homeowners nor investors.

The descriptive statistics in the third part of Table 6 suggest that the fairness evaluations of high-income owners/investors are based primarily on personal values of economic individualism. Even though high- and low-income owners/investors are similar in their reliance on outcome-processing modes of fairness evaluation, they differ sharply in their perceptions of the fairness of the government-citizen transaction. Low-income owners/investors are the least likely to perceive unfairness in the government-citizen transaction, while high-income owners/investors are the most likely. High-income owners/investors also have the lowest mean ratings for perceived inequities in the rich-poor social comparison and the strongest correlation between the perceived unfairness of the two types of reference transactions (r=-.44, p<.0001). They also are the least likely to approve of federal spending on public welfare programs for the poor.

DISCUSSION AND CONCLUSIONS

Given the ubiquity of outcome- and norm-processing models throughout the social sciences, it is not surprising to find evidence for both types of models in a study of perceived tax fairness. However, the existence of such sharp distinctions among various categories of taxpayers in the use of outcome and norm processing suggests that the differential processing of fairness evaluations reflects alternate frames of reference, not simply the mixed effects of a hybrid model. There is no doubt some degree of self-selection by taxpayers into different personal tax situations, particularly among those with higher incomes.¹³ But the results also point to the importance of situational variables, in particular, the nature of public policies themselves and the intersections of these policies with the life styles of taxpayers.

Reactions to the tax policy of uniform labor taxation and, to a lesser extent, progressivity are consistent with what an outcomeprocessing model of decisionmaking would predict. The results for uniform labor taxation are sufficiently consistent across analyses

¹³ Little is known about the role of tax considerations in the spending and investment decisions of individuals. Tax benefits may play a secondary role of shaping the size of a mortgage or the choice of investment instruments, while having little effect on the basic decision to become a homeowner or an investor.

to suggest that at least some tax policies trigger an outcomeprocessing approach to fairness evaluation in and of themselves. That is, people evaluate the fairness of their own tax burdens in terms of whether they think government is providing a fair and reasonable tax policy.

In contrast, the two tax avoidance policies tend to trigger norm-processing frames of fairness evaluation. Tax subsidies and economic incentives appear to be framed as rights or entitlements: While their presence is taken for granted, their absence is deplored. Homeowners and investors do not pay attention to either their attitudes toward or their financial gains from the tax avoidance policies that benefit them when evaluating tax fairness, but instead focus on the perceived misuse of government power. Lowincome renters and noninvestors, in contrast, focus on their inability to qualify for valued tax breaks. This pattern of responses, plus the greater use of vertical social comparisons among low-income respondents more generally, points to a relative deprivation interpretation of the effects of tax avoidance policies on taxpayer fairness evaluations.

Why do tax subsidies and economic incentives trigger relative deprivation and social comparison processes among nonrecipients? The two policies share several features that differentially affect the relative salience of government and other taxpayers. Uniform labor taxation and progressivity focus on how the government treats and categorizes income. In contrast, tax subsidies and economic incentives focus more on the spending and investment decisions of individuals. Taxpayers who do not claim deductions and credits have missed out on opportunities to lower taxes that, at least in theory, are available to all. Their inability to claim available deductions and credits may be seen as a personal loss or failure, instead of just a cost or legal obligation imposed by government (Kahneman and Tversky 1984).

In this context, we should note the ease of using the language of winners and losers when discussing tax subsidies and economic incentives, while the application of similar language to the tax policies of progressivity and uniform labor taxation seems somewhat awkward and inappropriate. The decision by government to subsidize specific kinds of investments and expenses made by some, but not all, taxpayers may communicate profoundly symbolic yet personalized messages about the nature of membership, status, and desert in American society. Both homeownership and capital investment are highly valued in the United States; renters and noninvestors who value but have not achieved these goals may feel they are being told by the law that they just don't quite belong (Lind and Tyler 1988; Perin 1977).

Feelings of relative deprivation may also result from mismatches between general tax policies and specific tax provisions. As the factor analysis in Table 1 suggests, respondents evaluate questions about specific features of the law in terms of global policy goals and values. The tax rules and regulations articulated by policymakers and tax administrators, in contrast, are more detailed and particularistic in character. For example, those who believe deductions for mortgage interest and property taxes are fair may actually be endorsing a more inclusive right to housing subsidies, while tax law itself restricts such subsidies to property owners. Likewise, respondents may believe that all savings and investments should be rewarded with lower taxes. Tax law in 1985, however, rewarded risky and more long-term investments, while taxing fully interest earned from regular savings accounts and capital gains from short-term investments.

The particularistic character of tax law and tax administration may also account for the focus by taxpayers who qualify for tax subsidies and economic incentives on the citizen-government transaction. Homeowners and investors have more complex tax forms and schedules to file, greater administrative and recordkeeping burdens, and higher likelihoods of being audited by the Internal Revenue Service (Internal Revenue Service 1987:54; Slemrod and Sorum 1984). Further, the inclusion of state and local taxes as deductible expenses on federal income tax returns may serve to heighten the visibility and salience to homeowners and business owners of their total tax bill from all levels of government (Sears and Citrin 1982).

A cognitive account that emphasizes the relative salience of government versus other taxpayers, however, does not adequately explain why homeowners/investors do not take their own tax deductions into account when evaluating the fairness of personal tax burdens. The process of claiming deductions and credits on tax returns may increase the salience of government and bureaucracy, but by the same token it should also heighten awareness of the dollar value of tax preferences provided by government and their contribution toward lowering the bottom line of taxes owed. But that is not the case; when evaluating personal unfairness, homeowners and investors ignore their tax deductions entirely rather than incorporating them into the same outcome-processing frame of fairness evaluation they otherwise employ.

Lack of attention by homeowners and investors to their financial benefits from tax avoidance policies could reflect the operation of other cognitive processes. Prospect theory, for example, argues that people give greater weight to losses than to gains (Kahneman and Tversky 1984); the pain associated with paying taxes may simply outweigh any relief provided by tax deductions. Homeowners and investors may also attribute their ability to claim tax deductions and credits to their own effort, or the efforts of their tax practitioner, rather than perceiving tax deductions and credits as government benefits administered through the tax system.

It is also possible to construct motivational accounts for these

same results. Early formulations of equity theory (Adams 1965; Homans 1974) hypothesized that people would feel guilty if they perceived themselves as benefiting unfairly from preferential treatment. One way of avoiding feelings of guilt is to ignore or discount information that might lead to perceptions of personal advantage. This interpretation is consistent with the lack of attention to tax deductions and credits among owners/investors, as well as the weaker effects of the rich-poor social comparison. Selective attention could also reflect attempts to avoid cognitive dissonance among taxpayers who oppose welfare programs while claiming government benefits in the form of tax deductions and credits.

Cognitive and motivational explanations of biases in perception and judgment are difficult, and perhaps impossible, to distinguish empirically (Tetlock and Levi 1982). This article can only raise as possibilities these alternative interpretations for the results involving tax avoidance policies. While the explanation for these effects remain unclear, the results indicate that tax policies that allow people to lower taxes legally serve in the aggregate to increase the perceived unfairness of the tax system. These policies generate perceptions of unfairness among taxpayers who do not qualify for the tax benefits they provide, without any offsetting reductions in perceived unfairness among those who do qualify. Tax avoidance policies are also an expensive revenue drain. In 1986, the revenue cost of tax deductions, exclusions, and credits amounted to \$827 for every \$1,000 of revenue collected from the individual income tax (Manvel 1990).

However, because those who qualify for tax benefits feel they are entitled to them, curtailing tax avoidance policies would probably, at least in the short run, increase their already high levels of perceived burden (Blau 1964; Kahneman et al. 1986). Feelings of entitlement to lost deductions probably account in large part for negative public attitudes toward the Tax Reform Act of 1986, even though that law lowered tax rates and provided tax cuts for most taxpayers (McGraw 1989; Swingen 1989; Harris, Inc. 1987).¹⁴

We should note that another, and quite different, interpretation is also possible from these data. If one were to try to fashion a single decision rule to characterize all taxpayers in our sample, that rule might well read "maximize perceptions of unfairness." Fairly constant and high levels of perceived unfairness are observed among taxpayers occupying vastly different social and eco-

¹⁴ A comparison of the 1985 data with responses to a follow-up survey in 1990 found a pattern of results consistent with this interpretation. Perceptions of unfairness in the rich-poor social comparison declined substantially between 1985 and 1990. Evaluations of personal tax burdens remained level, but this was due to offsetting changes over time among those high and low in tax avoidance effort. Respondents who describe themselves as low in avoidance effort in 1990 perceived lower personal tax burdens than similar respondents in 1985, while the opposite trend was found among those describing themselves as high in avoidance efforts (see Kinsey and Grasmick 1991).

nomic niches in our society. In addition, taxpayers seem to use precisely that frame of fairness evaluation that will make them feel worse off. This suggests that taxpayers begin with an initial reference point of assuming unfair taxes and then focus their selection and processing of tax information on those aspects of the tax system that serve to confirm this belief. A longitudinal study of citizen reactions to tax reform in Sweden suggests some support for this possibility; taxpayers reacted to reduced marginal tax rates by adjusting downward their beliefs about what constitutes a reasonable tax rate (Wahlund 1989).

According to this line of argument, tax policies themselves do not affect fairness evaluations, but different tax policies provide better interpretive "hooks" for some taxpayers than others in confirming prior beliefs. This is a very different causal model from the one assumed in our analysis (see also Tyler, Rasinski, and McGraw 1985). It has the virtue of simplicity, but it does run counter to findings by other justice research that people are motivated to perceive fairness in their personal life situations (Crosby 1982; Lerner and Miller 1978). It also assumes that social conditions and personal experiences themselves have little effect on the formation of justice perceptions, an assumption inconsistent with other research findings (Lind and Tyler 1988; Tyler 1990; Tyler, Casper, and Fisher 1989).

The cross-sectional nature of our data preclude the possibility of disentangling further the interrelationships of tax policies, personal situations, and evaluations of personal tax burdens. However, these results do document the existence of connections between substantive tax policies and perceptions of personal unfairness. They also suggest the usefulness of conceptualizing outcome-processing and norm-processing modes of fairness evaluation as alternative frames of reference. It will require both experimental and longitudinal research to clarify the nature of the policy-fairness relationship and to identify more clearly factors that trigger the selection of different frames of fairness evaluation.

APPENDIX VARIABLE DEFINITIONS AND DESCRIPTIVE STATISTICS

- DEPENDENT VARIABLE. Response alternatives range from (-2) far too little to (2) far too much, with (0) about right.
 - Perceived personal tax unfairness (mean=.81, SD=.66, alpha=.87). Average of responses to three questions: (1) degree to which people like respondent pay too much or too little in taxes in light of what their fair share should be, (2) ratings of personal tax burdens, considering the amount of money left after taxes and (3) ratings of personal tax burdens, considering what the federal government is expected to do.
- 2. POLICY EVALUATIONS. Response alternatives were: (1) very unfair, (2) somewhat unfair, (3) somewhat fair, and (4) very fair.
 - a) Tax subsidies (mean=3.53, SD=.54, alpha=.84). Perceived fairness of allowing tax deductions for (a) large medical expenses, (b) property taxes paid by homeowners, (c) interest paid on mortgages, loans, and charge accounts, (d) state and local income and sales taxes, and (e) charitable contributions.
 - b) Economic incentives (mean=2.56, SD=.71, alpha=.62). Perceived fairness of (a) tax deferrals for retirement savings, (b) allowing some types of investment income to be excluded from taxation or taxed at a lower rate, and (c) tax shelter investments that provide large tax deductions.
 - c) Uniform labor taxation (mean=2.42, SD=.77, alpha=.76). Perceived fairness of (a) taxing income from tips same as regular wages and salaries, (b) taxing income from odd jobs the same, (c) taxing bonuses the same, and (d) treating personal use of a company car as taxable income.
 - d) Progressivity (mean=2.81, SD=.98). Perceived fairness that taxpayers with higher incomes pay a larger percent of their adjusted income in taxes than those with lower incomes.
- 3. PERSONAL TAX SITUATIONS
 - a) Renter. Dummy variable coding that respondent rents home (28 percent).
 - b) Extra labor income. Dummy variable of whether household member in last three years received income from a second job on the side or income from tips or commissions (30 percent).
 - c) Log household income (mean=3.35, SD=.70). Missing values (6 percent) replaced by regression estimation. Predictors were age, age squared, number of investment income sources, and whether respondent is a single female. Coding for dummy variable is income greater than \$30K (49 percent).
 - d) Noninvestor. Dummy variable of nonreceipt in the last three

years of income from dividends, rental property, capital gains, or self-employment (46 percent).

4. REFERENCE TRANSACTIONS

- a) Perceived unfairness of government-citizen transaction (mean =-.03, SD=.46). Mean rating of distributive fairness of the tax burdens of the eight types of taxpayers listed in Table 2. Converted to z-scores for analysis.
- b) Perceived unfairness of the rich-poor comparison (mean=1.06, SD=.41). The standard deviation of fairness ratings across the eight categories of taxpayers in Table 2. Converted to z-scores for analysis.

5. CONTROL VARIABLES

- a) Age/10 (mean=4.30, SD=1.61). Respondent's age (divided by 10 to improve readability of tables).
- b) Education (mean=14.06, SD=2.70) Number of years of education
- c) Tax avoidance effort (mean=2.34, SD=1.10). Whether respondent or family member made a lot, some, only a little, or no effort in last three years to plan financial affairs in order to legally pay as little tax as possible. High score indicates greater effort.
- d) Past tax cheating. Dichotomous variable of whether respondent admitted overreporting income or claiming an undeserved deduction within the past five years (20 percent).
- e) Support for welfare programs (mean=2.79, SD=.78, alpha =.79). Level of agreement that federal government should spend more money to provide (a) low-cost medical care, (b) housing subsidies for the poor, and (c) job training for the poor.
- f) Political voice (mean=2.53, SD=.77, alpha=.53). Level of disagreement that (a) public officials don't care what people like me think and (b) people like me don't have any say in what government does.
- g) Trust in government (mean=2.31, SD=.73, alpha=.67). Level of agreement that (a) federal officials are intelligent people who know what they are doing and (b) government can be trusted to do what is right.

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