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Fudging Failure: The Economic Analysis

Used to Construct Child Support Guidelines[1]

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Federal law requires that all states have guidelines to determine, in most cases, the amount of a child support award. Federal law also requires states to reexamine their guidelines every fourth year to ensure that they continue to set appropriate awards in light of possibly changing economic conditions. These revisions are typically carried out with the assistance of economic consultants. This Article is about the substance of that revision process as it is conducted in most states, and in particular the method employed by the economic consultants that assist in the revision process. Their method assumes a particular conception of how child support awards should be formulated. I explain below why this conception is most accurately labeled the "continuity-of-marginal-expenditure" model. Consultants then engage in a technical exercise through which they implement this model, ultimately yielding a set of recommended award levels for varying family sizes and parental incomes.

This Article explains why this model simply fails to engage the basic policy questions that must be addressed in any rational analysis of child support policy. Moreover, it shows that

even if, adventitiously, the model were correct, its implementation is badly flawed, for two separate reasons. First, it relies upon an economic tool, the equivalence scale, that has been appropriately criticized in the economic literature as theoretically suspect and empirically unverifiable. Second, it relies upon compromised data from the Consumer Expenditure Survey. While the problems with this data may be less important for other applications, in this case they introduced distortions in the consultants' analysis that have important policy implications. These conceptual and implementation flaws in the typical consultant's analysis are especially troubling because they appear to be entirely invisible to the policymakers charged with writing child support guidelines. This Article, therefore, is not about whether child support guidelines are too low or too high. It is about how an opaque technical analysis relied upon, but poorly understood, by policymakers prevents them from even considering that question in any systematic way. Child support guidelines are thus an example of a troubling phenomena that may arise in other lawmaking areas as well: the displacement of policy analysis by "expert consultants" who convert the rulemaking task into a technical exercise that conceals the policy implications of their methodological choices from those responsible for choosing the policy.

Part I of this Article identifies and explains the "continuity-of-marginal-expenditure" principle implicitly assumed by the economic consultants relied upon in the writing of support guidelines, and shows why this principle directs attention away from the real policy question that those writing support guidelines should address: what level of child support is most consistent with the twin goals of protecting child welfare and of treating both parents fairly in the allocation of the support burden between them. Part II examines the standard consultant methodology more closely. It shows how the equivalence scale tool relied upon by consultants necessarily leads to guidelines based upon marginal expenditures, it discusses why this is almost certainly the wrong foundational principle to use, and it explores why, in any event, equivalence scales are regarded with suspicion in the economic literature. It also explains the difference between the two equivalence scales used by consultants who work on child support guidelines, and why the choice between them is both consequential and unavoidably arbitrary. Part III looks at the data one must necessarily rely upon if the dominant equivalence scale methodology is used: the Consumer Expenditure Survey of the Bureau of Labor Statistics. It shows why important defects in that data source, some well-known, pose particular problems for this use of it. Most central is the Survey's systematic undercount of income for the lower 40 percent of the population, and of expenditures for the upper 20 percent. These undercounts in the available data combine with the typical consultant methodology to yield a highly regressive support schedule that is more an artifact of the bad data than a reflection of actual parental behavior. The Article concludes with some suggestions for how the current process can be refashioned and improved, including alternative bodies of research that might be relied upon during the revision process. These suggestions are made with full appreciation of the methodological barriers that pose challenges to any effort at reform. Those barriers suggest that while the current process can be improved, we cannot achieve the kind of precision in implementing any policy choice that might seem implied by the nature of support guidelines themselves, which by law are required to give an exact dollar amount of the appropriate child support award in each case. Nonetheless, we can do better than we do today. Improvement is possible, but only if rulemakers confront and make the important policy choices overtly.

I. THE CONCEPTUALIZATION OF CHILD SUPPORT GUIDELINES: FUNDAMENTALS OF THE CURRENT APPROACH

Since 1989, the federal Department of Health and Human Services ("H.H.S.") has required all states to have child support guidelines "based on specific descriptive and numeric criteria" that lead to the computation of a specific child support award in each case.[1] The purpose was to simplify the process through which the amount of a child support award is determined, thereby making it easier and less costly for a custodial parent to obtain a support order. State law must provide that the amount yielded by application of the required guidelines is presumed to be the correct amount of the child support award, although the presumption can be rebutted if the court explains why it is "inappropriate or unjust" in the particular case.[2] Each state must review its guidelines every four years to ensure that they continue to provide for an

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[1] 45 CFR § 302.56(a)(2) (1989).

[2] These provisions are contained in 45 CFR § 302.56, which reads in part as follows:

(a) Effective October 13, 1989, as a condition of approval of its State plan, the State shall establish one set of guidelines by law or by judicial or administrative action for setting and modifying child support award amounts within the State.

. . .

(c) The guidelines . . . must at a minimum:

(1) Take into consideration all earnings and income of the noncustodial parent;

(2) Be based on specific descriptive and numeric criteria and result in a computation of the support obligation; and

(3) Provide for the child(ren)'s health care needs, through health insurance coverage or other means.

. . .

(e) The State must review, and revise, if appropriate, the guidelines established under paragraph (a) of this section at least once every four years to ensure that their application results in the determination of appropriate child support award amounts.

(f) Effective October 13, 1989, the State must provide that there shall be a rebuttable presumption, in any judicial or administrative proceeding for the award of child support, that the amount of the award which would result from the application of the guidelines established under paragraph (a) of this section is the correct amount of child support to be awarded.

(g) A written finding or specific finding on the record . . . that the application of the guidelines . . . would be unjust or inappropriate in a particular case shall be sufficient to rebut the presumption in that case, as determined under criteria established by the State. Such criteria must take into consideration the best interests of the child. Findings that rebut the guidelines shall state the amount of support that would have been required under the guidelines and include a justification of why the order varies from the guidelines.

(h) As part of the review of a State's guidelines required under paragraph (e) of this section, a State must consider economic data on the cost of raising children and analyze case data, gathered through sampling or other methods, on the application of, and deviations from, the guidelines. The analysis of the data must be used in the State's review of the guidelines to ensure that deviations from the guidelines are limited.

appropriate child support award.[3] But the federal rules are oblique at best in suggesting the criteria by which to determine whether an award is "appropriate." The only hint is contained in 45 C.F.R. § 302.56(h), which specifies that in the required quadrennial review of the support guidelines, "a State must consider economic data on the cost of raising children."[4] This provision is misleading. It appears to assume that objective data on the cost of raising children exists and ought to be important, and perhaps even primary, in setting the level of child support awards. Yet that was not the accepted understanding in 1989 when the federal government adopted these guideline regulations. In the standard work on the topic then available, Thomas Espenshade explained that "asking about the cost of raising a child is unsatisfactory" for two reasons: (1) "it invites answers that focus on some minimum level required for biological subsistence," and (2) it "implies a single answer when in fact a range of answers is possible."[5] Indeed, a range of answers is inevitable once one goes beyond subsistence measures, because the cost of a child, like the cost of an adult, depends upon the living standard one means to reference: the cost of living, in other words depends upon the standard of living.[6] An upper-class lifestyle costs more than a middle-class lifestyle which costs more than a lower-class one which costs more than life at the poverty threshold. Espenshade thus emphasized that he was "estimating parental expenditures on children, not the cost of raising them" and parental expenditures varied with parental income.[7] All three of the reports later commissioned under H.H.S. auspices echoed this view.[8] The prevalent understanding, both then and now, is that

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[3] 45 CFR § 302.56(e).

[4] 45 CFR § 302.56(h).

[5] Thomas J. Espenshade, Investing in Children: New Estimates of Parental Expenditures 1-2 (Urban Institute 1984).

[6] Id at 2.

[7] Id at 2, 1-2.

[8] The first such report, formally issued by an Advisory Panel assembled by the National Center for State Courts, was funded by the federal Office of Child Support Enforcement, and relied explicitly on Espenshade:

At the higher income levels, there is no absolute standard for the "cost" of rearing a child. Rather, economic studies are able to infer the "cost" or rearing a child at a given income level only by observing the actual expenditures allocated to a child in existing households. . . . For development of child support guidelines, Thomas Espenshade's work entitled *Investing in Children* seems to provide the most credible economic foundation.

Robert Williams, *Development of Guidelines for Child Support Orders: Advisory Panel Recommendations and Final Report*, p II-ii, in U.S. Department of Health and Human Services, Office of Child Support Enforcement (1987). The second, by David Betson, was prepared under a contract with the University of Wisconsin's Institute for Research on Poverty for a final report to H.H.S., *Alternative Estimates of the Cost of Children from the 1980-86 Consumer Expenditure Survey*, Institute for Research on Poverty Special Report # 51, 1990. While the text as well as the title of Betson's report often refers to the "costs" of children, the only thing he even purports to measure is parental expenditures on them—essentially equating costs and expenditures. And indeed, the report describes itself as a response to a provision in § 128 of the Family Support Act of 1988 (PL 100-485) that required H.H.S. to "detail the patterns of *expenditures* on children in two-parent families and single-parent families." Id at 1 (emphasis added). The third, Lewin/ICF, *Estimates of Expenditures on Children and Child Support Guidelines* (1990), was a companion to the Betson report that fulfilled the remaining Congressional reporting requirements. It reviews the Betson study as

while the regulation refers to costs, the relevant data really concerns expenditures, and because parental expenditures on children vary with parental income, so does the "cost" of children, and thus also the level of the appropriate child support award. The authors of the first two reports became the frequently relied upon consultants by states revising their child support guidelines.[9]

So the C.F.R.'s reference to the cost of raising children is widely understood as a term of art that in fact refers to parental expenditures on children.[10] The point is not just technical. Because expenditures on children vary with parental income, this conception of child support endorses the idea that the noncustodial parent should share his income with his child. Support obligations should, in other words, increase with the noncustodial parent's income.

But as the states typically implement guidelines, the cost of children still plays a role. Minimum subsistence costs affect guideline amounts at the low end of the income range, where support guidelines may require obligors to pay a higher percentage of their income in order to ensure that the child does not fall below that minimum threshold, at least so long as the support order would not force the obligor himself below that level.[11] At very high incomes,

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well as other sources of information on how much parents in fact spend on their children, reviewing both the methodologies and the implications of the data for child support. The Lewin report explicitly recognizes that the purely empirical question of how much parents in fact spend on their children is different from the question necessarily addressed by child support guidelines, which is how much separated parents *should* spend on their children. Id at 1-5.

[9] Some of this history is recounted in Jane Venohr and Robert Williams, *The Implementation and Periodic Review of State Child Support Guidelines*, 33 Fam L Q 7, 7-9 (1999). Williams founded and remains the head of Policy Studies, Inc., a private company which appears to be pervasive in providing states with consulting services in connection with their regular guideline reviews. According to the company's web site, they have conducted studies to determine the "Economic Basis for Updated Child Support Schedules" for "numerous states."

Over the past 10 years, we have reviewed states' child support guidelines based on the most recent economic data on the costs of child rearing, developed new child support obligation schedules, and helped states examine the impact of adjustments to their support schedules for such factors as low income, second families, visitation, shared custody, medical and educational costs, etc.

Policy Studies Inc., <http://www.policy-studies.com> (visited Feb 4, 2004). Jane Venohr reports that PSI prepared guideline recommendations for consideration by the relevant state agencies in twelve states during 2000-03, and provided child support related consulting services to others. Telephone conversation with the author, December 23, 2003. Betson's estimates of child support expenditures are routinely relied upon by PSI in their consulting work. In 2001 he updated his 1990 report with more recent data from the Consumer Expenditure Survey. See Jane Venohr and Tracy Griffith, *Economic Basis for Updated Child Support Schedule, State of Arizona* 3, Policy Studies, Inc. (Feb 6, 2003). Chapter Five of California's *Review of Statewide Uniform Child Support Guideline, 2001*, available at <http://www.courtinfo.ca.gov/programs/cfcc/programs/description/1058study2001.htm> was prepared with PSI's assistance. It contains no attribution to Betson, but is in fact his 2001 report. Telephone conversation with Jane Venohr, December 23, 2003.

[10] Venohr and Griffith, *Economic Basis* at 2 (cited in note 9).

[11] For such a provision, see American Law Institute, Principles of the Law of Family Dissolution § 3.053A (2002). The Melson Formula, named after the Delaware judge who first devised it, also incorporates this idea. See the description of it in Ira Ellman, Paul Kurtz, and Elizabeth Scott, *Family Law: Cases, Text, Problems* 533-34 (Lexis Law

a few states cap award levels, and others give judges increased discretion to set the award below the amount that would result from simply extrapolating proportionately from guideline awards applicable at lower incomes.[12] These limits on high-end awards arise from the belief that at the point at which the guidelines top out, all reasonable costs of the child have been met, making further increases in the support level unnecessary. Ideas about the objective cost of children thus do sometimes set boundaries for support awards at both income extremes. But between these bookends, the principle of income sharing prevails across an income range that includes the great majority of parents. For these households, then, the central question presented to a committee drafting support guidelines is: exactly how much income should the noncustodial parent be required to share with the custodial household?

That question could be answered in many different ways. The existing focus on parental child expenditures effectively adopts, as the norm by which guidelines are constructed, the amount that parents in intact families spend on their children. This norm can be called the continuity of expenditure rule, and can best be formulated in percentage, rather than dollar, terms: parents ought to contribute the same percentage of their income to child support after a divorce that they would have contributed if their relationship had not dissolved.[13] Under this approach, one calculates the average amount spent on children by parents in an intact family, at any given income level. Divorced parents with the same aggregate income are then required to pay the same percentage of that income in child support. Each parent's respective share of the obligation is proportional to that parent's share of the total parental income. The support order requires the noncustodial parent to pay an amount equal to that parent's share; the rule assumes the custodial parent necessarily contributes her share in the course of maintaining the custodial household. Because of both constitutional and policy imperatives requiring that marital and nonmarital children be treated equally, the same

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3d Ed, 1998). On the other side, states often have special provisions excusing low-income obligors from what might otherwise be the full amount of their obligation, but these provisions also often specify minimum support payments that apply even if they constitute a higher percentage of the obligor's income. See the compilation of low-income support provisions gathered by the staff of the National Conference of State Legislatures, available at <http://www.ncsl.org/programs/cyf/incomelow.htm> (visited Dec 17, 2003).

[12] For examples of such provisions, see the discussion in Ellman, Kurtz and Scott, *Family Law* at 554-57 (cited in note 11), and the compilation gathered by the staff of the National Conference of State Legislatures, available at <http://www.ncsl.org/programs/cyf/incomehi.htm> (visited Dec 17, 2003).

[13] Of course, we cannot know what any particular set of parents in particular would have spent on their children had their marriage remained intact, and so this sentence is not literally true even though it expresses the underlying idea upon which guidelines are based. That idea is implemented, however, by looking at the average expenditures by parents in intact families who have the same combined parental income as do the divorcing parents. The *average* expenditures of these parents becomes the benchmark upon which the guidelines rely. One can think of this benchmark as our best prediction, on average, of what the particular parents would have spent on their children if they had not divorced. As set out here, the description fits what are called "income shares" states more closely than "percentage of obligor income" states, but there is in fact no difference in principle between them, as explained below.

guideline number is applied to support awards for children whose parents were never married and never lived with one another in an intact family relationship.[14]

As a principle of fairness, and of social policy, the continuity-of-expenditure norm is plausible. What people in intact families spend on their children can be seen as a convenient and reasonable benchmark of society's view as to the fair and appropriate amount to require divorced parents to spend on their children. Yet, it is not the inevitable benchmark. For one thing, the usual analysis only attempts to determine the *average* expenditure level on children in families at given income levels, but there is reason to think that expenditures of actual families vary quite considerably around that mean.[15] In that case, one could move some distance above or below the mean figure and still claim nearly as substantial an endorsement from the expenditure data—which means that policy considerations arising from other sources can reasonably be given proportionately more weight. More fundamentally, parents who live together in an intact family are in a fundamentally different situation than divorced parents living in separate households, both economically and with respect to their relationship with their children. Nor are divorced parents all similarly situated with one another, much less with parents in intact families: some divorced parents remarry, some do not; some benefit economically from remarriage, for others remarriage yields additional financial obligations. Perhaps these and other differences should influence our judgment of the fair level of child support, or perhaps they should not. The matter is not free from doubt. While a continuity-of-expenditure principle necessarily answers these questions (because it does not count such differences), it does so by ignoring them rather than by confronting and resolving them.

If one considered how much income the noncustodial parent should share with the custodial household, without thinking in continuity-of-expenditure terms, one might take a very different approach. The first matter to consider is why we require support. Our primary reason might be to serve the child's interests, or to ensure that the support burden is allocated fairly as between the parents, or to achieve a balanced blend of the two. If one believes the child's interests are paramount, for example, one might believe the support level should be set

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[14] The basic constitutional cases are *Gomez v Perez*, 409 US 535 (1979) (finding that Texas violated the Equal Protection Clause when it allowed marital but not nonmarital children to enforce a right of support), and *Clark v Jeter*, 486 US 456 (1988) (holding Pennsylvania violated the Equal Protection Clause in barring support actions for nonmarital children brought more than six years after their birth, where later actions for marital children were not similarly time barred). Federal law then required states to allow support claims for nonmarital children at any time before the child's eighteenth birthday. See Public Health and Welfare, 42 USC § 666(a)(5) (1999). While these cases do not necessarily require that the amount of support for marital and nonmarital children be identical, this is the interpretation put on them by some courts and the approach generally taken by the states. See the discussion at Ellman, Kurtz, and Scott, *Family Law* at 1061-62 (cited in note 11).

[15] See Laurie J. Bassi and Burt S. Barnow, *Expenditures on Children and Child Support Guidelines*, 12 J Pol Anal and Manage 478, 486 (1993). They estimate that if the mean expenditures on two children in a two-parent household is 27 percent of all expenditures, one has to employ a range of 15 to 36 percent to capture 80 percent of those families—with the remaining 20 percent evenly divided between those below 15 and those above 36. They derive these figures from Chapter 7 of Edward Lazear and Robert Michael, *Allocation of Income Within the Household* (University of Chicago 1988).

high enough to ensure that the child, who is presumably the innocent victim of the marital failure, suffers no financial harm at all from the divorce, even if that principle requires an award which gives the child a higher post-divorce living standard than the support obligor enjoys. Yet an exclusive focus on the child might also lead one to conclude that a custodial parent with sufficient resources to provide the child with a comfortable environment should receive no compelled support from the other parent, because the child welfare value of any award could not be shown. In other words, if child welfare concerns were all we cared about, we would presumably require the highest support levels from which the child would derive benefit, but no higher—and so in writing the guidelines we would mainly want to know all we could about the benefits that flow to children from various levels of support payments.[16]

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[16] One might assume that from the child's perspective, the higher the support amount the better, but that is probably not right. Obviously, the child may also experience detrimental effects from a support award that impoverished the obligor parent. But even beyond that, it is not necessarily clear that more money always yields more benefit. Rather, it seems likely that the relationship between the dollar amount of support and the amount of benefit conferred on children is not linear—that at least above some support level, marginal dollars will purchase declining amounts of child welfare. This observation might be important if one wished to set the child support award by balancing the additional welfare purchased against the detriment imposed on the obligor from a higher support order. Indeed, it is plausible that there is an amount above which additional money adds little or nothing to child welfare, but it is very unclear at what point that amount is reached. Some writers suggest that money does not play a large role in children's outcomes. See, for example, Susan Mayer, *What Money Can't Buy: Family Income and Children's Life Chances* (Harvard 1997). On the other hand, some sociologists find some evidence that financial hardship in the custodial family translates into real welfare losses for the child, and even that child support dollars are better than other dollars. S.S. McLanahan, et al, *Child support enforcement and child well-being: Greater security or greater conflict?*, in I. Garfinkel, S.S. McLananhan, and P.K. Robins, eds, *Child support and child well-being* (Urban Institute 1994). But that conclusion may be contested. One careful review of the literature concludes that the assumption that

children's well-being is linked to the amount of child support received, has received surprisingly little test or support....Only McLanahan et al (1994) has subjected the assumption to test, and the results are mixed. While the association initially appears positive, what cannot be ruled out is the issue that families in which child support is well-paid are different from those in which it isn't in many respects, and that it is these other factors rather than child support per se that truly account for any differences in children's well-being. Some of these factors, such as level of education and/or income of each of the parents have been measured and statistically controlled for in the past empirical investigations. However, the factors that are known (according to the most definitive standard, Amato & Keith's 1991 meta-analysis) to best account for children's adjustment overall, far better than children's economic levels, such as level of conflict between the parents, and degree of the co-parental relationship, are empirically very intertwined with child support received, yet have not been held constant in the above findings. Thus it remains highly plausible that those couples who enjoy what Ahrons call "a good divorce", a rather civil, amicable and cooperative post-divorce relationship, one which features a mutually supportive co-parental relationship, have far better adjusted children, and more substantial and compliant child support is paid, yet no direct causal relationship applies between the two. What remains to be shown by conclusive evidence, then, is that child support payments make a contribution to children's well-being even in the absence of a civil relationship between parents.

S.L Braver, *The Gender Gap in Standard of Living After Divorce: Vanishingly Small?* 33 Fam L Q 111 (1999). Braver also suggests, however, that there is some support in the literature for the inference that child support payments which are voluntary or otherwise uncoerced convey more concern and love than mandated or ordered child support, and thereby confer important psychic benefits on the child. S.L Braver, et al, *Promoting better fathering among divorced nonresident fathers*, in W.M Pinsof and J. Lebow, eds, *Family Psychology: The Art of the Science* (Oxford forthcoming).

In contrast, if fairness between the parents is the paramount purpose of support, one would require support from the noncustodial parent even if it added little or no child benefit to the comfortable environment that a financially secure custodial parent might alone be able to provide, because one would still want the noncustodial parent to contribute his fair share, thus freeing some of the custodial parent's resources for non-child expenditures. We might also decline to make some awards that were appropriate on child welfare grounds because they would be regarded as unfairly burdensome to the obligor.

One can thus see that child welfare and fair treatment of the child's parents can yield conflicting outcomes. A rational child support system must reflect an appropriate compromise between them. While the child's interests must be a central concern in thinking about child support orders, no child support law has ever made them the exclusive concern. For example, even though arguments can be made that the child's interests would be compromised by a support order that impoverished the obligor, there is no doubt that the law's concern with treating the obligor fairly is an independent source of limitation on the size of any support order that might be entered against him. No one thinks it would be fair to give the child every dollar the obligor has, even if the child would benefit from the money, because we are also concerned with the obligor's own needs. Nor can we explain the law's insistence that the obligor pay support to a custodial household with ample resources entirely in child welfare terms. It rather seems clear that the explanation for requiring support in such cases includes, in important measure, our belief that it would be unfair to leave even the financially comfortable custodial parent obliged to shoulder the entire support burden. That is why the law requires support from the noncustodial parent even when the custodial parent is able, and would, if necessary, be willing to pay for any expenditure required to ensure the child's welfare.

In short, while we care about child welfare, we also care about allocating the support burden fairly as between the parents, and that secondary concern with treating the parents fairly can, depending upon the facts, either enlarge or reduce the support order that we would otherwise impose if child welfare were our exclusive concern. Any set of child support guidelines thus necessarily states some position with respect to the proper tradeoff between these competing concerns of child welfare and fair treatment of each parent, whether or not those who write the guidelines approach their task with such tradeoffs in mind.[17]

Does the continuity of expenditure rule express the appropriate compromise of parental and child welfare interests? The answer to that question is not immediately obvious. What is more important, the question is not raised by the economic consultants upon whom guideline writers rely, and thus not asked by the guideline writers themselves—typically, committees reporting to either a legislative or judicial body.[18] The guideline writing process may of course

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[17] For an early and able statement of this point, see David Betson, et al, *Trade-Offs Implicit in Child-Support Guidelines*, 11 J Pol Anal & Manage 2, 10 (1992).

[18] A compilation compiled by the National Conference of State Legislatures finds that support guidelines are adopted by legislative action in twenty-five states, by judicial action in eighteen states, and by specially created agencies or commissions in the remainder. See National Conference of State Legislatures, available at

engage the attention of interest groups representing custodial or noncustodial parents, and these groups may battle over the impact of any proposed guidelines on their respective constituencies. But the standard economic analysis does not expressly recognize the inevitable trade-off between these competing interests, and it therefore lends no assistance to the policymaking body ultimately responsible for those tradeoffs. Indeed, it seems that participants in the process — members of the guideline writing committee — assume that the setting of support guidelines is an exercise in economic analysis requiring primarily technical economic expertise, rather than an exercise in policymaking requiring interest balancing. Even those inclined to challenge the numbers offered by the economic analysis may therefore feel constrained to frame their challenge as a question about whether the recommendations accurately implement the continuity-of-expenditure principle, rather than questioning whether that principle should be the ultimate benchmark against which support guidelines are measured.[19]

Guideline committees thus often view the economic analysis as implementing a predetermined principle of child support, so that the real question is the purely technical one of assuring that the guidelines correctly implement that principle. How could they think the principle is predetermined? Some may believe, erroneously, that to satisfy the federal law, they must not only follow the process of reconsidering the guidelines every four years, but they must also ensure that their guidelines implement the continuity-of-expenditure principle. Others may not appreciate that there is a choice to be made because they do not see the difference between the continuity-of-expenditure principle, and other possible principles that their guidelines might implement.

Consider, for example, three current and official New York publications that purport to explain New York's guidelines. The official web page of the New York City Administrator of Children Services, Office of Child Support Enforcement, explains that the goal of New York's guidelines "is to give children the same standard of living they would have if their parents were together."[20] A pamphlet issued by the New York State Division of Child Support

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<http://www.ncsl.org/programs/cyf/branch.htm> (visited Dec 29, 2003). Such tabulations necessarily oversimplify. For example, for this purpose California is counted among the twenty-five states that adopt their guidelines legislatively, but the legislation is based upon recommendations of a committee appointed by the California Judicial Council. An examination of the NCSL compilation shows that reliance on such specially appointed committees is common, even when the ultimate adopting authority is the legislature or the state's highest court. Consultants typically work with these committees rather than with the ultimate adopting authority.

[19] This certainly was my experience as a member of the Arizona guideline workgroup.

[20] New York State Division of Child Enforcement, available at <http://home.nyc.gov/html/acs/html/support/support_ocsecalc.html> (visited Feb 2, 2004). For a similar characterization, see the Ohio Department of Job and Family Services, Office of Child Support, *Program Guide* 6, available at <www.state.oh.us/odhs/ocs> (visited Feb 2, 2004) ("Ohio uses an income shares model which calculates a child support order by the standard of living that a child would experience if the parents were in the same household.").

Enforcement, entitled "What Non-Custodial Parents Need to Know About Child Support" explains: "The guideline was put in the law to make sure that people pay an amount for support that is actually close to what it costs to care for a child."[21] The June 2001 New York State Child Support Standards Act Quadrennial Evaluation further explains: "The guidelines, as written, produce awards roughly in line with the accepted standard of requiring the noncustodial parent to pay in support what he or she would have contributed to the children in an intact family."[22] These three contemporary descriptions of the same state guidelines express three entirely different principles which, if implemented, would yield three very different sets of guidelines — a fact that at least some child support officials of this very large and sophisticated state would appear not to understand.[23] Of the three, only the last comes close to expressing the continuity-of-expenditure principle upon which New York's guidelines are actually based, but even this third statement can easily be read to mean something quite different.[24]

States have in practice implemented the continuity-of-expenditure rule in one of two forms. The larger group have adopted what is called "income shares"; a substantial minority

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[21] New York State Division of Child Enforcement, "What Noncustodial Parents Need to Know About Child Support," (Pub 4721), available at <www.newyorkchildsupport.com> (visited Feb 2, 2004). This understanding of the guidelines' purpose seems common. A judge who has served several times in succession on the Arizona guideline committee explained to the author, when asked this question, that the guidelines were based on the cost of children and ensured that both parents paid their full share of those costs.

[22] New York State Division of Child Enforcement, Child Support Standards Act Quadrennial Evaluation, June 2001, available at <www.newyorkchildsupport.com> (visited Feb 2, 2004).

[23] The first statement is wrong because it implies the guidelines will provide the child with the marital living standard (the living standard the child would enjoy "if the parents were together"). It is virtually impossible in most cases to achieve this result, as is obvious, once one thinks about it. If the two parents have the same income as they did during marriage, the additional costs necessarily arising from the division of one household into two ensures that the custodial household cannot maintain the marital living standard without driving the noncustodial parent well below that. No child support guideline in the country, and certainly not New York's, actually adopts this principle. The second formulation is of course completely off because it is erroneously describes the guideline as requiring payment of the amount that a child "costs." The third formulation — that the "noncustodial parent to pay in support what he or she would have contributed to the children in an intact family" — may mistakenly be read by some as specifying a support order that would yield the marital-living-standard result described in the first. But that would be wrong because of confusion about how to measure "the amount that would have been contributed in the intact family". The normal American support guideline is designed to require that the noncustodial parent contribute an amount equal only to his likely *marginal* expenditures on the child if the family were intact, and that amount will *not* provide the custodial household with the marital living standard, except adventitiously in a small minority of cases (as explained later in the text). If the third statement is meant to reference a contribution larger than or different from the marginal expenditure, than it is not in fact an accurate statement of the intent of the New York guideline.

[24] The statement appears to express the continuity of expenditure principle. But as we shall see below, that principle, as implemented by nearly all state guidelines, in fact requires continuity of *marginal* expenditures only, not of all family expenditures which confer benefits on children. It seems likely that this subtle but important distinction would be missed by most readers.

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use the simpler "percentage of obligor income" ("POOI") approach.[25] Income shares states use guidelines that establish a combined parental child support obligation for any given number of children and the combined parental income.[26] The support obligor is then expected to pay his share of this combined parental obligation, which is proportional to his share of the combined parental income.[27] POOI states, by contrast, simply apply a percentage directly to the obligor income, without considering the obligee's.[28] If the percentage of their combined income that parents in intact families spend on their children does not vary with the level of their income, then these two systems will yield the same dollar award.[29] If the percentage of parental income spent on children does vary with income, then the income shares and POOI systems will not produce the same result. Many of the income shares guidelines in use today reflect the belief

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[25] One recent compilation found that thirty-three states employed income shares, and thirteen used POOI. Massachusetts and the District of Columbia were classified as "hybrid" in this compilation; their guidelines in fact reflect an analysis quite similar to that recommended by the American Law Institute (see the discussion below, at notes 30-36). This survey found three states employing what has been called the "Melson" formula; that approach is much like POOI except for its treatment of low-income families. Venohr and Williams, 33 Fam L Q at 19 (cited in note 9).

[26] See Betson, 11 J Pol Anal & Manage at 13-14 (cited in note 17).

[27] Id.

[28] See Venohr and Williams, 33 Fam L Q at 10-12 (cited in note 9).

[29] This point has been made before. See Betson, et al, 11 J Pol Anal & Manage at 10 (cited in note 17) (citing a 1989 working paper by Garfinkel and Melli). It can be demonstrated through this proof:

Assume Dad is support obligor. Let

D=Dad's Income

M=Mom's Income,

D%=Dad's percent of combined income=D/(D+M).

CE% be the constant percent of aggregate parental income (D+M) that parents spend on their children, throughout the entire income range.

Then

a) In POOI: Dad pays CE% of D, i.e., (CE%)(D)

b) In Income Shares:

(1) Total Child Support Obligation is (CE%)(D+M)

(2) Dad's Share is D%.

(3) Dad pays (D%)(CE%)(D+M)

But since D% = D/(D+M), we can substitute in (3)

(4) (D/(D+M))(CE%)(D+M)=(D)(CE%), the identical value as in POOI.

that as parents' income rises, they spend a lower percentage of their income on their children.[30] Whether this is true is not clear; there is good reason to think that parental expenditures on children may in fact be a roughly constant percentage of total expenditures over an income range that is wide enough to include the great majority of parents subject to support awards.[31]

In any event, it can be seen that both income shares and POOI systems share the premise that child support awards ought to be based upon an estimate of what parents in intact families spend on their children (the continuity-of-expenditure principle), even if there is disagreement as to whether upper-income parents spend the same percentage of income on their children as lower income-parents. Determining what parents in intact families in fact spend on their children thus becomes the fundamental inquiry every time a POOI or incomes-shares state (which is nearly every state) reviews its guidelines. As considered more fully below, this task presents both conceptual and practical difficulties: many household expenditures go to household public goods, such as heat, for which there is no unique correct allocation principle, and for most household private goods, such as food, data is available only for household consumption in total, not for consumption by individual household members.[32] To solve this difficulty, the economic consultants use a tool called the equivalence scale. The equivalence scale is supposed to permit the consultant to determine how much more a childless couple would have to spend to maintain the equivalent living standard when children are added to their household.[33] The consultant treats this additional expenditure as the dollar amount that a family at that income level spends on children. I will examine this method more fully below. At this point, however, the important point is that the equivalence scale method tells one the marginal expenditure on children only. For that reason the fundamental rule underlying most

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[30] See, for example, Venhor and Griffith, *Economic Basis for Updated Child Support Guidelines* at 11-12 (cited in note 9). New York, which does not use Policy Studies Inc., employs a constant percentage of parental income across the income range covered by its guidelines.

[31] The 1990 Betson study commissioned by H.H.S., widely relied upon in nearly all later child support expenditure studies done for support guidelines, concluded that "the cost of children expressed as a percentage of total expenditures is almost constant across all levels of total expenditures." David Betson, *Alternative Estimates of the Cost of Children from the 1980-86 Consumer Expenditure Survey*, Final Report to the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation 50 (1990). Betson looked only at families with total expenditures up to $75,000, which is approximately $112,000 in current dollars. Whether child expenditures are a constant percentage of *income* depends largely on whether expenditures are a constant percentage of income. There is clearly some level of family income above which consumption declines as a percentage of income. The question, in writing guidelines that set support awards by income, is the point at which that decline begins—only at the upper reaches of the income distribution, or throughout a large part of the income distribution range?

[32] See the Lewin/ICF, Estimates of Expenditures on Children and Child Support Guidelines at 2-11 (cited in note 8).

[33] See id. PSI does not itself perform this equivalence scale analysis. Rather, it relies on Professor Betson, who provides it with figures on child expenditures as a percent of total household expenditures, and consumption as a percent of net income. In the Arizona report, for example, Betson provided all the information in Table I-3, following page 12 of Appendix 1; PSI's analysis is based upon these figures. Telephone conversation with Jane Venohr, December 23, 2003.

modern support guidelines is more accurately called the "continuity-of-*marginal* expenditure" principle.

A simplified example explains that point. Assume that a childless couple lives in a one-bedroom apartment that rents for $1000 per month. They now have a child, and to maintain the equivalent housing standard, they could rent a two-bedroom apartment in the same complex for $1300 per month. The logic that underlies the equivalence table methodology would conclude that the housing expenditure on the child is $300 per month. If they have two cars when they are childless, and still only two cars after they have a child, there may be no marginal transportation expenditures on children (unless perhaps more miles are driven). The equivalence table method does not actually proceed item by item in this manner, but globally, but these examples communicate its fundamental logic. Yet any household has many joint consumption items; all its members benefit from the living room, the kitchen, the heating system, and the cars. Families make some expenditures (toys, children's clothing) that are solely for the child. But the child's welfare depends at least as much upon sharing in the benefits that flow to all family members from the family's expenditures on joint consumption items. Yet the equivalence table method systematically excludes them, in their entirety, from the accounting of child expenditures. It assumes, for example, that the noncustodial parent should share in the cost of the extra bedroom, but not in these other housing expenditures.

The economic consultants adopt this marginal expenditure approach without any explicit consideration of how it balances the various parties' competing interests. Perhaps adventitiously, however, if the parents are equal earners, this approach nonetheless yields a plausible compromise of the parties' interests. In such cases, it requires noncustodial parents to pay the custodial parent one-half of the marginal expenditures that the average intact family with the same income would have spent on its children (since the noncustodial parent earns one-half the total parental income). This transfer will probably leave these equal-earning parents with identical living standards in their respective households.[34] If one believes that the child's plausible financial claims are fully satisfied if the support award gives him a living standard equal to that of both his parents, this award leaves the child's claims uncompromised.

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[34] This assertion is roughly correct if Betson's classic estimates of the marginal cost of children for couples and one-parent families is correct. His "best guess of the total cost of raising children, expressed in percentage of total household expenditures as 25 percent, 35 percent, and 40 percent for one, two, and three children in a two-parent household and 40 percent, 55 percent, and 60 percent for one, two, and three children in a one-parent household." Betson, *Alternative Estimates of the Cost of Children from the 1980-86 Consumer Expenditure Survey* at 57 (cited in note 31). Assume that we have equal earning parents, each earning $10,000, and Mom will be the custodial parent. We transfer .25 or $2,500 from Dad to Mom under a standard marginal expenditure guideline. Mom thus has, post-transfer, $12,500, and Dad has $7,500. Under Betson's estimate, Mom's marginal expenditures on the child will be .4 of her post-transfer income of $12,500, or $5,000. Her household thus has the same living standard as a single childless person spending $12,500 less $5,000, or $7,500, exactly what Dad has, post-transfer.

More generally, if the marginal expenditure on children in a one parent household is C, then the child support transfer (T) that you need to give the equal earning parents equal living standard will always be C/(2-C)(I), where I is the income of either of the equal earning parents before any transfer. For two and three children households, then, Betson's estimate of C (.55 and .60) require child support transfers of 38 percent and 43 percent—a bit more than a marginal expenditure formula based on his two-parent households would yield.

Yet it achieves this result without asking the noncustodial parent to pay more than he would have spent on account of the child if the family were intact.[35] Thus when the parents are equal earners, an award based upon marginal child expenditures seems to satisfy fully the most expansive plausible claim that either side could make, and thus appears beyond objection.

But in the great majority of cases the parents do not have equal incomes, and then the marginal expenditure model yields a result that is harder to defend.[36] It allocates the custodial household no funds from which to pay joint consumption items (for example, the car, the heat, the portion of the rent covering everything other than the child's room). As the custodial parent's income declines relative to the noncustodial parent's income, the custodial parent has fewer resources with which to pay for these items. At the limiting case, the custodial parent with no income other than child support would have no resources with which to buy these items.[37] For this reason, the American Law Institute ("ALI") rejected the simple marginal expenditure model, concluding that it often failed to balance properly the relevant parties'

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[35] One might argue the noncustodial parent's obligation should fall below the amount he would have spent on the child were the parents living together because his responsibility for the child is reduced by the custodial arrangement. The claim would be that it necessarily impairs his relationship with the child, thus depriving him of a portion of the primary benefit of parenthood. There are some obvious responses to this argument. One might contest its factual premise, in the belief that the noncustodial parent who wishes to maintain a close relationship with his child can do so. And one might argue that the child's interest in receiving needed support trumps the obligor's complaint about impairment in the relationship, especially as the child is presumably blameless for the marital breakup and thus also for any impairment of the obligor-child relationship that results. There are cases, however, in the decree imposes a custodial arrangement on an objecting obligor that leaves him no plausible way to avoid impairment of his relationship with the child (as where the custodial parent is allowed to move with the child to a distant location). And there are cases in which the child's welfare does not appear to depend in any important way on the receipt of the full amount of child support. Where both these factors are present, the obligor's claim for reduced support is more plausible. See Ira Mark Ellman, *Should Visitation Denial Affect The Obligation to Pay Support?*, in William Comanor, ed, *The Law and Economics of Child Support Payments* (forthcoming 2004).

[36] I say "seems" because there are enough questions about the implementation of the standard economic analysis to make the actual impact of the guidelines much more difficult to characterize. Many of the apparent implementation flaws tend to reduce the support award below actual marginal costs, as explained later in this paper. On the other hand, it has been argued that the usual comparison of living standards between custodial and noncustodial households does not consider the potentially significant impact of the progressive income tax in improving the relative position of the lower income custodial household, and may not give sufficient consideration to the child care costs incurred by the noncustodial parent who regularly visits with his children. Sanford Braver and Davis Stockberger, *Child support guidelines and the equalization of living standards*, in William Comanor, ed, *The Law and Economics of Child Support Payments* (forthcoming 2004). I do not purport in this paper to sort out the net impact of these various problems, because part of my message is that the available economic analysis may not be able to do that.

[37] This is not a fanciful example. The custodial mother of young children may have no market income, or so little market income, net of childcare, that the point of the example is largely unchanged. This might seem a case in which an alimony award, in addition to child support, is more likely. But mothers who were never married to the father usually have no legal basis upon which to claim alimony, and the support guidelines apply equally to them. Such mothers are about one-third of all potential child support obligees. See Bureau of the Census, Current Population Reports P60-225, *Custodial Mothers and Fathers and Their Child Support: 2001* (Oct 2003), available at <http://www.census.gov/prod/2003pubs/p60-225.pdf> (visited Feb 2, 2003), which indicates that 31.2 percent of custodial mothers have never been married.

competing claims.[38] While the ALI's analysis notes the interests of the parents, the child, and the state, the core of its analysis lies in reconciling the noncustodial parent's claim, that the law should require him to contribute no more to the child's support than he would have contributed if the family had remained intact, with the child's claim to suffer no more financially from the divorce than does any other member of the family.[39] To fully satisfy the child's claim would require equal living standards for the custodial and noncustodial households. But from the obligor's perspective, payments based upon an equal living standards principle would necessarily require him to pay enough to bring all members of the custodial household to this level, not only the children to whom he has a duty. The fact that this reality is unavoidable does not make it unobjectionable, yet it also does not fully answer the child's claim to suffer no more than either of his parents from the family breakup.

The ALI's compromise of these competing claims is expressed in § 3.04 of the Family Dissolution Principles, which directs that guidelines be constructed so that the child enjoys "a standard of living not grossly inferior to that of either parent."[40] The obligor's interest is recognized in that the child's claim to equal treatment is not fully met, but the child's interest is also recognized in that the obligor must pay enough to ensure that the child's living standard—and unavoidably, the custodial parent's as well—is not "grossly inferior" to the obligor's.[41] The ALI would implement this principle by requiring that the guidelines provide a sliding supplement to the marginal expenditure support calculation.[42] The supplement is zero when the parents are equal earners, or when the custodial parent earns more than the noncustodial parent.[43] It is triggered when the noncustodial parent earns more than the custodial parent, and gradually increases with the size of that earnings gap, calibrated to meet the "not grossly inferior" standard.[44] Thus the ALI, like the continuity-of-marginal expenditure rule, rejects the equal living standards principle; the difference is that the ALI acknowledges the likelihood of a living standards gap and manages it explicitly.

There is no inherent reason why a continuity of expenditure rule need be a continuity of *marginal* expenditure, as the economic consultants who implement the expenditure approach

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[38] See ALI, *Principles of the Law of Family Dissolution*, § 3.05A and Comment (cited in note 11).

[39] Id.

[40] ALI, *Principles of Law and Family Dissolution*, § 3.04 (cited in note 11).

[41] Id.

[42] Id at § 3.05.

[43] Id.

[44] ALI, *Principles of Law and Family Dissolution*, § 3.05 (cited in note 11).

apparently assume.[45] Marginal cost analysis is central to economic theory, of course. A factory owner deciding upon whether to enlarge his output would rationally consider only the marginal cost of the additional output, not the average cost; so long as he can sell the additional output for more than its marginal cost, he is better off. But someone considering going into the widget supply business who wanted to know what it cost to make widgets would be wrong to look only at the marginal cost of the last widget made by an existing manufacturer. The prospective new entrant really needs to know his likely average cost, at various projected outputs, and his likely sales volume, because he doesn't want to enter the market at all unless his average selling price will exceed his average cost.

So whether one is interested in average costs or marginal costs depends upon the reason for asking about costs in the first place. If one wants to know how much additional income a childless couple will need in order to maintain their living standard if they have a child, then the prospective child's marginal cost is indeed the answer.[46] But if one wants to know whether the custodial household has sufficient resources to provide the child with an appropriate environment, the marginal costs of providing for that child if he or she were added to some other theoretical but factually nonexistent household—the intact family—is quite irrelevant. We could calculate the marginal costs of all the members of the custodial household in this manner, and if we allowed that household a total budget equal to the sum of their individual marginal costs, thus calculated, they likely all would starve. Reconstituted post-dissolution households are like new entries in the widget business. They are start-ups. They can no more survive on a budget based on their theoretical marginal costs of adding children to an existing household, then could our prospective industrialist profit by selling his first ten widgets at a price equal to the marginal costs incurred for the last ten made by the current market leader.

In sum, then, the usual policy debate can be capsuled as a choice between three possibilities: (1) the continuity-of-marginal-expenditure model currently employed (knowingly or not) by most states, (2) the equal living standards model, urged by some feminist literature but adopted nowhere, and (3) the ALI proposal, a compromise between the two that is similar to Massachusetts's guideline formulation, and which explicitly rejects both the marginal expenditure norm and the equal living standards norm. Notice, however, that regardless of which of these policy choices one makes, the actual implementation of the chosen policy requires the ability to compare the living standards of the differently sized households that

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[45] For example, Policy Studies, Inc. rejects the Department of Agriculture's approach to estimating the costs of children largely on the ground that it is not limited to marginal costs: "Child support is commonly understood to provide for the additional costs of children. It seems very unlikely that the costs of children would proportionately equal the adult's initial costs." Venohr and Griffith, *Economic Basis* 12 (cited in note 9). It is "commonly understood" because that is the approach always taken by PSI itself as well as by the initial reports commissioned by HHS. See note 8.

[46] This is in fact the question that Espenshade was answering in his classic study, see Espenshade, *Investing in Children* 2 (cited in note 5). His marginal expenditure methodology was appropriate to the question with which he was concerned, but it is not appropriate to the question addressed in the writing of child support guidelines. It appears to have been applied in this context without serious consideration of whether it was apt for this purpose.

emerge from the family dissolution. The ALI and equal living standards proposals require such a comparison because comparative living standards are the benchmark by which their guidelines would be set. While the continuity-of-marginal-expenditure model makes no explicit reference to the post-divorce households' relative living standards, it nonetheless relies just as fully as the first two on the ability to make that comparison. That is because the equivalence table methodology it employs to gauge the marginal expenditures on children requires it: that methodology determines the marginal child expenditure by calculating how much more the larger family with children must spend to achieve the same living standard as the smaller childless family. Obviously, one can do that only if one has the ability to determine the expenditure levels at which families of different sizes in fact achieve equivalent living standards.[47]

The ability to gauge the actual impact of any theoretical guideline model is thus crucial; one could otherwise adopt, for example, a marginal expenditure model but unknowingly implement it with guidelines that yield equal living standards.[48] Part III looks more closely at how living standard comparisons are normally made in practice. I conclude that unavoidable implementation difficulties make all such comparisons suspect, thus casting doubt on whether any of the three competing conceptions can be reliably implemented. First, however, Part II takes a closer look at the continuity-of-marginal-expenditure principle. I consider further conceptual flaws with it and conclude that we should not want to adopt it even if the implementation difficulties could be solved.

II. A CLOSER LOOK AT THE CONTINUITY-OF-EXPENDITURE RULE

Any economic study prepared for any state's guideline review could exemplify the conceptual difficulties introduced in the preceding Part. I will focus here on the report prepared in 2003 for Arizona's quadrennial guideline review by Policy Studies, Inc. ("P.S.I.").[49] Arizona is one of thirty-three income shares states, and PSI provides guideline-consulting services to many more states than any other company.[50] Moreover, its basic method--reliance upon estimates of marginal expenditures generated from living standard comparisons using equivalence scales—-is used by other guideline consultants, as well. The discussion that

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[47] For example, in their Arizona Report, Policy Studies, Inc. observes that "[t]he common element of all the estimation methods is that they attempt to allocate expenditures to the children based on a comparison of expenditure patterns in households with and without children and which are deemed to be equally well off." Venohr and Griffith, *Economic Basis* at appendix I (cited in note 9).

[48] This claim is made with respect to the guidelines now in force in some states in Braver and Stockberger, *Child support guidelines and the equalization of living standards* (cited in note 36).

[49] See Venohr and Griffith, *Economic Basis* at 2 (cited in note 9).

[50] See note 9.

follows is therefore relevant to current practices in most states. Most certainly, the economic analysis contained in any consultant's report seeking to implement the continuity-of-expenditure principle necessarily makes methodological choices that have potentially important policy implications.

To generate estimates of marginal expenditures on children, consultants compare the living standards of different size households. This comparison of course requires an independent measure of living standard, so that one knows, for example, whether a childless couple spending $55,000 per year lives as well as a couple with two children spending $75,000 per year.[51] This question interested some economists long before anyone had to draft child support guidelines. Considering the matter in the nineteenth century, Ernst Engel, a German economist, noticed two empirical realities. First, as incomes increase, families of the same size devote a lower percentage of their total expenditures to food.[52] Second, as family size increases, families with the same income devote a higher percentage of their total expenditures to food.[53] From these two facts Engel posited that the proportion of a family's expenditures devoted to food was inversely related to the family's wellbeing or standard of living.[54] This intuitively plausible conclusion is the basis of the Engel equivalence scale.[55] A competing equivalence scale was proposed later by Rothbarth. He assumed that adults in different households have the same living standard if they spend the same dollar amount on exclusively adult items.[56] That is, a couple with two children has the same living standard as a childless couple when both couples spend the same dollar amount on adult items. At one time the adult items used to implement this equivalence scale were tobacco and alcohol.[57] Today, adult clothing usually serves as the measure.[58] While there are other equivalence scale candidates, Engel and Rothbarth dominate.[59]

To employ either scale in preparing child support guidelines based upon the continuity-of-marginal-expenditure principle, one needs expenditure data on families of different sizes

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[51] See notes 7-8 and accompanying text.

[52] Bassi and Barnow, 12 J Pol Anal & Manage at 480-81 (cited in note 15).

[53] Id.

[54] Much of this discussion is based upon Bassi and Barnow, 12 J Pol Anal & Manage at 478-97.

[55] Id at 480-81.

[56] Id at 481.

[57] Id at 481.

[58] Bassi and Barnow, 12 J Pol Anal & Manage at 481.

[59] For a review of the literature on the various equivalence scales and their use to capture expenditures on children, see Julie Nelson, *Household Equivalence Scales: Theory versus Policy?*, 11 J Labor Econ 471 (1993).

with different incomes.[60]   One looks, for example, at the percentage of total expenditures that childless couples earning $60,000 per year on average devote to groceries, and then finds the income level at which a couple with two children devote that same percentage of their total expenditures to groceries. If that income level is $90,000 per year, one might conclude that a childless couple earning $60,000 per year would have to spend an additional $30,000 to maintain the same living standard after adding two children to their household. (This is a schematic description of the method; it requires further refinements in actual implementation, as explained below.) This calculation then leads to the conclusion that the marginal expenditures on two children in four-person families earning $90,000 per year is $33,000, or 33 percent. Repeating this process at various income levels and family sizes would provide such marginal expenditure estimates throughout the range contained in the support guidelines.

Essentially the same process would be employed if the Rothbarth scale is used. One would find the dollar amount that a childless couple earning, for example, $60,000, spends on adult clothing, and then locate the income level at which a couple with two children spends that same dollar amount on adult clothing; the rest of the analysis would be the same. It appears that most states originally used economic analyses employing the Engel estimator, but over time many switched to the Rothbarth, which is now dominant.[61]   PSI will presumably prepare guidelines based on any estimator requested by the relevant state agency, but recent reports seem to suggest use of the Rothbarth estimator.[62]

The choice of scale is important, because Engel and Rothbarth produce very different estimates of child expenditures. The precise figures yielded by either scale vary, depending upon certain methodological choices.[63] Consistently, however, the Rothbarth scale yields lower

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[60] I will discuss below the quality of the data on which consultants rely; for now I assume the data is good and look critically at the consultants' method.

[61] "[M]any states originally developed their schedules from Engel estimates but have switched to those based on the Rothbarth estimates. There are 19 states that currently base their schedules on the Rothbarth estimator and eight states (including Michigan) that currently base their schedules on the Engel estimator." Jane Venohr, *Report on the Michigan Child Support Formula, Report to the Michigan Supreme Court*, State Court Administrative Offices, Policy Studies, Inc. 4 (April 12, 2002), available at <http://www.courts.mi.gov/scao/services/focb/formula/psireport.htm> (visited Dec 29, 2003). The same report later includes a table showing that of thirty-three incomes shares states, ten currently employ guidelines based on the Engel estimator and nineteen the Rothbarth, with four states adopting another approach. Id at Exhibit III-4, page 33.

[62] See id at 16. See also Venohr and Griffith, *Economic Basis* 2 (cited in note 9) (noting that "the Rothbarth estimator seems to have the most economic validity and plausibility"). For this purpose, as for may others, PSI relies upon the recommendation of Professor Betson whose early studies established the method PSI uses and whom PSI retains as a consultant.

[63] The methodological choices include decisions as to what counts as an expenditure, and what does not (for example, mortgage principal payments) and, more fundamentally, how to correct for unavoidable deficiencies in the available data. These matters are discussed in detail in the third section of this article. Note as well that even holding these choices constant, the estimates produced by either scale appear to vary over time. At least, this is the assumption that lies behind the federal requirement that states revisit their guidelines every four years. It seems implausible that parental practices would vary very much over any such short time horizon. It is perhaps more plausible that the relative

estimates of marginal child expenditures than does Engel. For couples with one, two, or three children, the Rothbarth estimates go as low as 11, 19, and 25 percent, respectively, of parental income spent on children. The corresponding figures for the high end of Engel estimates is 23, 34, and 41 percent.[64] Given this potentially large discrepancy, one might reasonably ask which scale is correct. Unfortunately, there is no empirical basis upon which to choose. One cannot test either scale against a known measure of living standard because there is none (if there were, we would use it rather than either of these scales).

Indeed, there is good reason to be skeptical of both scales. Engel necessarily assumes that the relationship between food consumption, and all other consumption, is the same for children as for adults. If this assumption is wrong, then the addition of children to the household will alter the share of expenditures on food independently of changes in the living standard. But there is no way to assess the accuracy of this assumption, because any such determination would require allocating the remaining household expenditures between children and adults, which is precisely what we cannot do in any nonarbitrary fashion. (If we could, then we could use that methodology directly to calculate the expenditures on children.) The Rothbarth estimator necessarily assumes that expenditures on the measured adult goods (typically, adult clothing) is a valid proxy for all expenditures conferring benefits upon the adult household members—that the benefits conferred on adults from all household expenditures rise and fall proportionately with adult clothing expenditures. There is in principle no way to test this assumption empirically either. Adding children to a household could cause expenditures on jointly consumed items to rise or fall in response to changes in *adult* demand, but there is no way to know that because there is no way to know what portion of any jointly consumed item to allocate to adult demand.

Not only are both scales impossible to verify empirically, but there is reason to question each of them. It is at least plausible to think that children might be food-intensive, as compared with adults; if this were true then Engel would systematically overestimate marginal expenditures on children. And one might question whether expenditures on adult clothing are equally good proxies for all adult expenditures in households with and without children: there is in fact some evidence to suggest that the addition of children to a household changes the adults' priorities with respect to their expenditures on themselves, in ways that would lead the Rothbarth scale to underestimate marginal expenditures on children.[65] Particularly as adult

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cost of adult clothing, as compared with other expenditures, might vary, or that tax rules might change so that net income, and thus expenditures, becomes a higher or lower percentage of gross income.

[64] See Bassi and Barnow, 12 J Pol Anal & Manage at 485 (cited in note 15).

[65] The data suggests that the presence of children in the household leads adults to substitute goods consumed mostly or only by adults, for goods that are shared with children. See Bassi and Barnow, 12 J Pol Anal & Manage at 483 (cited in note 15) (citing empirical research by Julie Nelson). If adults in households with children devote a higher proportion of their expenditures to adult goods, then the dollar amount of their expenditures will equal that of childless couples at a lower income than if the proportion of expenditures devoted to exclusively adult goods was unaffected by the presence of children. In this case, the Rothbarth equivalence scale underestimates marginal expenditures on children, by its own terms (although of course, whether it is actually correct in its relative measurement of living

clothing typically constitutes only 2 percent of all household expenditures, the Rothbarth measure would be very sensitive to such changes in priorities.[66] Yet it is difficult to get other measures of purely adult household consumption. Many items are in principle difficult to allocate among household members (like heat), and for those (like food) which are in principle allocable, there simply is no available data that breaks down consumption by household member.[67] The main available alternative, a measure of adult consumption of alcohol and cigarettes, has its own distortions, and in any event, the reported consumption of these items in the Consumer Expenditure Survey ("CES") is clearly much lower than the true consumption.[68]

It is ultimately the same root problem that prevents an empirical test of either estimator: the vast majority of household expenditures are devoted to items of joint consumption, and any empirical test of either estimator requires allocating those expenditures among household members—the very task that the estimators themselves purport to perform.[69] An empirical test of their assumptions thus requires lifting oneself by one's bootstraps. In the end, then, all these estimators necessarily assume rather than reveal the answer to the central question: how to allocate joint consumption items among members of the household. In fact, the allocation of joint consumption items between different household members is part of a class of problems for which any solution is unavoidably arbitrary.[70] That is, the difficulty goes beyond the inability to test empirically the estimators' assumed allocation rule. It is also the

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standards across households remains unknown and unknowable).

[66] For 2002, married couples with children on average reported expenditures on apparel and apparel services of $2,643, of which $1,664 was spent on children under 16. This means the total spent on adults in these households averaged about $1,000, while the mean total expenditures for these households was $57,835. CES Current Tables, Table 5, *Composition of consumer unit: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2002*, available at <http://www.bls.gov/cex/2002/Standard/cucomp.pdf> (visited Dec 11, 2003). The full set of tables can be accessed through links at <http://www.bls.gov/cex/home.htm#tables>. Tables for prior years, available through links at this site, show similar proportions.

[67] Bassi and Barnow, 12 J Pol Anal & Manage at 478-97.

[68] E. Raphael Branch, *The Consumer Expenditure Survey: A Comparative Analysis*, 117 Monthly Labor Rev No 12 47, 49 (1994) (showing that the CES reported alcohol consumption at 40 percent or less of the PCE figures, and tobacco consumption ranging from 62 to 54 percent of the PCE figures).

[69] They purport to perform this task because their implied definition of equal living standards is equal consumption of goods by the adults in the two households being compared.

[70] Conceptually, the allocation of joint consumption items among household members presents the same problem as allocating responsibility for an injury among its multiple causes. For a discussion of why any allocation is inherently arbitrary, see David Kaye and Mikel Aickin, *A Comment on Causal Apportionment*, 13 J Legal Stud 191 (1984). The same issue also comes up in when a court is asked to allocate property between marital and separate components by identifying the share attributable to labor with the share attributable to capital. See the discussion in ALI, *Principles of the Law of Family Dissolution* § 4.05, Comment b and Reporter's Notes to Comment b (cited in note 6). The arbitrary nature of the accounting conventions used for this problem has also been addressed in the accounting literature. See the sources gathered in William Kruskal, *Terms of Reference: Singular Confusion About Multiple Causation*, 15 J Legal Stud 427, 435 n 9 (1986).

case that there is no inherent theoretical or principled basis upon which to allocate joint consumption items among household members. To illustrate this point, I examine further the allocation implied by PSI's method.

Recall that Engel and Rothbarth share the assumption that each household member should be allocated only his or her marginal consumption of the jointly consumed item; they differ only in their assumptions (untestable) of how to measure that marginal consumption. A marginal consumption rule determines the household members' share of jointly consumed items according to the order in which they are considered. That is, the entire base cost is allocated to the first household member considered, then additional costs only are allocated to the other household members. In the limiting case there are no additional costs, and thus nothing is allocated to any household member beyond the first. For example, the home is heated at a cost of $200 per month, but the marginal expenditure on heat associated with adding a person to the household is essentially zero. If I assume the household begins with the parent, and the child is added, then the heating cost of the child is zero. But if we assume the custodial household begins with the child, whose presence defines it as the custodial household, then the child's cost for heat is $200 per month and the custodial parent's cost is zero.

No inherent or objective principle of economics or of cost allocation tells you which person to start with, or whether this entire approach makes sense. That choice must therefore be made by reference to the policy purpose for making the inquiry, not by appeal to economic methodology. If the inquiry into cost allocation is prompted by the need to write child support guidelines, then neither of the choices forced upon us by the marginal expenditure method make sense: the child's share of the heat bill should be neither all nor nothing. An acceptable living environment for the child requires heat, and any child support regime must be concerned with whether there will be resources to pay the heat bill. It must also be concerned with allocating the heat bill fairly as between the parents, especially in light of the fact that the heat benefits all members of the custodial household, not just the children subject to the support order. One might think, as does the ALI, that any resolution of this question must necessarily balance both these concerns.[71] One might also believe that the parents' relative contribution to the heat bill ought to depend, at least in part, on their relative capacity to pay for it.[72] Such considerations suggest that it would be the rare case in which one concluded that either parent's share should be 0 or 100 percent, but those are the only choices offered by the marginal expenditure methodology.

The United States Department of Agriculture develops estimates for child expenditures that do not use a marginal expenditure methodology and do not attempt global comparisons of

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[71] See notes 34-39 and accompanying text.

[72] See notes 34-39 and accompanying text.

living standards between households of different size.[73] It instead examines categories of expenditures separately, allocating some, such as housing and transportation, on a per capita rather than marginal expenditure basis.[74] Others, like food and health care, are allocated among family members using proportions derived from specialized surveys.[75] Finally, some items that are entirely child related are reported in the Consumer Expenditure Survey and allocated entirely to children, such as children's clothing, education, and childcare.[76] This method avoids many of the arbitrary choices inherent in the marginal expenditure approaches, but it requires other ones. For example, per capita allocations of housing and transportation expenses may in some sense seem reasonable, but are ultimately no more defensible on any objective theoretical basis than the arbitrary choices required by the marginal expenditure method. In the case of small children, one might imagine that large portions of a home are used primarily by adults, and should perhaps be allocated entirely to them. Or, one might imagine that adults with children pay a premium for homes in child-friendly locations with better schools and easy access to parks or other child-centered recreational opportunities, so that the children's presence in the household accounts for more than their per capita share of the housing cost. Or finally, one might argue that the minor children require a custodian, so that all the housing expenses should be attributable to the children (in a household consisting exclusively of children and the custodial parent).

Estimates based on the Department of Agriculture methodology are near or above the Engel estimates, depending upon when they were completed.[77] PSI rejects them out of hand because they are not *marginal* expenditures.[78] In other words, PSI begins and ends with the

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[73] Mark Lino, *Expenditures on Children by Families: 2001 Annual Report*, U.S. Department of Agriculture, Center for Nutrition Policy and Promotion, Miscellaneous Publication No. 1528-2001 (2002). For a published version of the prior year's equivalent study, see Mark Lino, *Expenditures on children by families: U.S. Department of Agriculture estimates and Alternative Estimators*, 11 J Legal Econ 31, 31 (2001). Lino argues that the Agriculture Department's approach is a better basis for support guidelines than alternative approaches using a marginal expenditure methodology. Id. at 35.

[74] Id at 35.

[75] Id at 32-33. For food it relies on the National Food Consumption Survey conducted by the Agriculture Department, and for health care it relies on the National Medical Care Utilization and Expenditure Survey conducted by the U.S. Department of Health and Human Services.

[76] Id at 34.

[77] See Venohr and Griffith, *Economic Basis* 12 (table) (cited in note 9).

[78] This point is made in their discussion of why they reject the Department of Agriculture estimates (referred to by them as the CNPP estimates):

The CNPP estimates are not deemed suitable because they rely on an average cost approach. The division of some expenditures between parents and children assumes a conclusion about the real allocation of those expenditures, which is particularly bothersome for setting child support awards. Child support is commonly understood to provide for the additional costs of children. It seems very unlikely that the costs of children would proportionately equal the adult's initial costs.

belief that a marginal expenditure model is appropriate; it does not examine that belief or consider any alternatives. Nor in fact is there any reason to think an economist would possess the expertise necessary to choose among the alternatives, given that the choice must necessarily be made on the basis of child support policy, rather than upon any principle of economic analysis.

In sum, we have first seen that guideline consultants today all assume that the correct benchmark for the appropriate level of child support is the *marginal* expenditure on children in intact households. Treating the child as the marginal member of the household has the effect of excluding most of the household public goods from the child support calculation.[79] There is no intrinsic principle of economics that requires this treatment. While it vindicates one legitimate interest—that of the noncustodial parent in avoiding subsidy of the other parent via child support—it attaches no weight to the child's legitimate interest in living in a household with an economic level not grossly below that of either parent. Second, assuming one nonetheless wishes to employ a marginal expenditure methodology, we have seen that there is no empirical or principled basis for choosing among the available equivalence scales, which yield very different estimates of marginal expenditures. The increasingly common reliance upon the Rothbarth scale is effectively a policy choice that it is better to err with support guidelines that are too low, than to err with support guidelines that are too high.[80] But that is precisely the kind

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Venohr and Griffith, *Economic Basis* at 12 (cited in note 9). The criticism of the CNPP for its assumptions about how to allocate costs might suggest to the reader that the marginal expenditure approach used by PSI was not also based upon assumptions, as of course in fact it is. The marginal expenditure approach, the report says, is "commonly understood" as the proper basis of child support, but there is no attempt to explain why the marginal cost assumption better reflects proper child support policy than the assumptions that underlie the Agriculture Department estimates.

[79] Household public goods are those goods, like heat, which do not cost more to provide for all household members than for one. A focus on marginal expenditures of course also excludes from the tabulation of child expenditures the initial outlay on items which do cost more when household members are added. For example, the household may not purchase additional automobiles when children are added, but might incur a small additional cost if, for example, the car is driven more miles and thus consumes more gasoline and requires more maintenance. The exclusion of the base amount of joint expenditures of this kind presents the same problem as the exclusion of public household goods, however.

[80] PSI has provided state agencies with estimates based on Engel equivalence scale and the Department of Agriculture approach (which is not based on marginal expenditures), when so requested. Author's telephone conversation with Jane Venohr, December 23, 2003. It nonetheless appears that PSI urges its clients to adopt Rothbarth-based estimates, in part because it reports that Betson favors them. See Venohr and Griffith, *Economic Basis* at 11 (cited in note 9):

> [T]he 1990 Betson-Engel estimates approach per capita (i.e., average cost) estimates of child-rearing expenditures [and therefore] appear unreasonable . . . marginal costs should be lower than average costs . . . . the implausible results from the Engel methodology renders the Rothbarth estimator to be the preferred choice . . .

It is true that if one accepts that marginal costs should be the test, the Engel estimates appear high—but that hardly demonstrates that the Rothbarth estimates are more accurate. PSI's own presentation of the most recent Engel estimates are that parents spend, on one, two and three children respectively, 30 percent, 44 percent, and 52 percent

of choice that needs be made by the public agency responsible for the guidelines, not by the economic consultant.

This Part has focused on two conceptual difficulties with current practices for producing guidelines: the unexamined assumption that marginal expenditure analysis is appropriate, and the reliance upon unverifiable equivalence scales such as Rothbarth and Engel as its best metric. One further conceptual issue must be acknowledged, although I do not explore it here. All the methodological alternatives for equating household living standards assume that the child's presence in a household reduces the parents' living standards by the cost of the child expenditures, however they are measured. The definition of *living standard* implicit in this approach excludes consideration of any *nonfinancial* benefit that the child's presence may confer on a parent. One can reasonably argue that this is a cramped and unrealistic measure of living standard, and that in judging whether a child support order treats the parents fairly one must consider the positive value of the child's presence as well as the dollar consequences. Certainly, both parents act as if they believe the child's presence matters. Child support obligors who feel their relationship with their child has been impaired by the custodial arrangement often feel keenly that the support obligation is unfair for this reason.[81] Child support obligees generally seek the role of custodial parent, even if they believe the child support system is financially inadequate, presumably because they anticipate that custody will confer what they regard as significant nonfinancial benefits. Obviously, no trade off of nonfinancial benefits for the custodial parent, against support dollars, can be justified in terms of the child's interests. But if the ultimate child support award must reflect a compromise between the child's interests and a fair balance of the parental interests, it can be argued that the nonfinancial benefits of custody should be included in the calculus.

Yet once one enters this realm, one must also acknowledge that the child's presence has nonfinancial costs as well, and these are also ignored by the standard of living analysis. The responsibility of primary custodian necessarily entails uncompensated loss of leisure as well as inevitable constraints on a variety of personal life choices. It may not always be clear whether the overall result is a net nonfinancial benefit or cost. In addition, the magnitude of any gain or loss seems likely to vary with the child. No existing child support law overtly adjusts the amount of child support to account for this nonfinancial factor, whether as an addition or a subtraction. Examining whether such an adjustment is justified, and if so, how it might be measured, is beyond this Article's scope. I simply note here that it is in fact excluded from the definition of living standard as child support guidelines are currently implemented.

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of total expenditures. This is lower than average cost, which would be 33 percent, 50 percent, and 60 percent.

[81] Jessica Pearson and Jean Anhalt, *Examining the Connection Between Child Access and Child Support*, 32 Fam and Conciliation Cts Rev 93, 93-109 (1994).

III. Implementation Problems in the Marginal Expenditure Methodology

A. Introduction

Implementing the marginal expenditure methodology for constructing child support guidelines requires data that relates expenditures and income for families of different incomes and compositions. The CES conducted by the Bureau of Labor Statistics ("BLS") is the only comprehensive source of such data now available, and PSI necessarily relies upon it, either directly or by incorporating the estimates provided by Professor Betson.[82] Yet there are flaws in the CES data with potential significance for guideline writing. PSI's reports acknowledge some of these flaws, and adopt conventions for dealing with them. Other flaws are not acknowledged.[83] In addition, PSI makes certain choices in its use of the data that have policy implications. This Part examines these data issues. While it focuses on the use of CES data by PSI, the data problems have broader relevance because they pose equivalent difficulties for any method that relies upon them. The conclusion is not necessarily that CES data should not be used, given the paucity of alternatives. But given the policy implications of these data defects and any corrective strategies, policymakers need to be aware of these issues and involved in their resolution.

I begin by revisiting how PSI uses this data. Suppose, like PSI, one uses a version of the Rothbarth equivalence scale in which the metric is the dollar amount spent on adult clothing. Suppose further that one finds that the average annual expenditure on adult clothing by childless couples earning $60,000 per year is $2,200 per year.[84] One might then look at the data on couples with two children to find the income level at which such a four-person family spends $2,200 per year on adult clothing. Suppose that income level is $90,000 per year. The assumption of the Rothbarth scale is that these two families enjoy the same living standard.[85]

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[82] Venohr and Griffith, *Economic Basis* at 12 (cited in note 9).

[83] Rather than prepare its own child expenditure estimates, PSI generally relies on work by Professor Betson. It is not always clear from reading PSI's reports which items it has calculated and which have been adopted from Betson. Jane Venohr, the author of all the PSI reports referenced in this essay, advises that Table I-3 in Appendix 1 of the Arizona report is provided to PSI in the form therein reproduced, so that all the calculations that precede the figures contained in this table are performed by Betson and not PSI. Telephone conversation with Jane Venohr, December 23, 2003. Because PSI adopts the Betson methodology, I sometimes attribute these figures, and the methodological choices that produce them, to PSI even though they have not themselves performed them. This seems particularly appropriate where the description of Betson's methodology on which I rely is contained in the PSI reports. In some cases I rely also on Betson's original 1990 report on child expenditures, which details his methods. Where convenient, however, I have attempted to distinguish Betson's and PSI's relative contributions to the final product.

[84] Actually, this figure is high-it turns out that adult clothing expenditures are typically around 2 percent or less of total household expenditures. See note 22-25 and accompanying text.

[85] See Betson, *Alternative Estimates of the Cost of Children from the 1990 Consumer Expenditure Survey* at 10 (cited in note 31). This is the basic approach as outlined by Professor Betson. In this excerpt Betson refers to "adult goods" rather than adult clothing. Because of limitations in the available data, the only adult goods on which data is available is adult clothing, tobacco, and alcohol, and there are particular problems in relying upon the last two.

As an initial matter one might therefore think the marginal expenditures on children in families with two children and incomes of $90,000 per year is $30,000, or 33 percent of their income.[86] While the Betson analysis on which PSI relies uses this basic approach, it makes certain refining adjustments to reflect the fact that the $30,000 gap in our example will include some components that are not in fact child expenditures, and will include some child expenditures that are not included in the basic guideline figures because they are added on separately when the actual support award is calculated.[87]

Most fundamentally, the income figures used in our example are gross incomes, and some of the gross income gap between these families will inevitably go to taxes, including FICA, rather than child expenditures. Betson therefore subtracts taxes from the gross income figures to arrive at net income, using the dollar amount of taxes paid as reported in the CES itself.[88] In addition, families with different incomes and different compositions may deploy different amounts of their net income to savings or other items which Betson or PSI believe are appropriately excluded as not representing child expenditures. PSI therefore calculates a consumption figure for each category of family, by subtracting from the total expenditures as reported in the CES, items that Betson and PSI believes appropriate to exclude.[89] These subtractions include savings, pension contributions, "personal insurance" and "contributions". These are CES categories; Betson simply subtracts the amounts that CES reports for these categories.[90] "Contributions" apparently includes voluntary transfers to other individuals, such as gifts to third parties, including adult children.[91] "Personal insurance" does not include health insurance or automobile insurance; it does include life insurance.[92] PSI also deducts from the

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[86] Essentially the same process would be employed if the Engel scale were used. The only difference is that one would look at the percentage of all expenditures that are devoted to groceries, rather than at the dollar amount spent on adult clothing. Having found that percentage for the childless couple earning $60,000, one would then look at two-child families to find the income level at which that same percentage is spent on groceries. Suppose it is $90,000. One would then conclude that the marginal expenditure on children in two-child families earning $90,000 is $30,000, or 33 percent of their income.

[87] What follows is a description of their method so far as it was possible for the author to determine. The method is not always clearly explained in the consultant's report, see Venohr and Griffith, *Economic Basis* at Appendix I, Table 3 (cited in note 9). The allocation of responsibility between PSI employees, and Professor Betson, with whom they consult, is in particular often difficult to ascertain. The description of PSI's method provided here was aided considerably by telephone conversations between the author and Jane Venohr, to whom the author expresses his thanks.

[88] For the purpose of this calculation, union dues are treated as taxes.

[89] Id at Table I-4.

[90] See Venohr and Griffith, *Economic Basis* (cited in note 9).

[91] See *Composition of consumer unit* (cited in note 66).

[92] Id.

consumption figure expenditures on health care for children and on childcare.[93] This deduction is appropriate because Arizona, like most states, treats these expenses separately from the basic child support obligation arrived at by applying the grid in the guidelines.[94] This separate treatment allows for case-by-case determinations of these costs, which may vary considerably from family to family. Since each obligor's share of these expenses is added to the grid-based support order at the end, they should not be included in the basic calculation in the grid.

The amount arrived at after making these subtractions from total expenditures is called total consumption.[95] In our example, suppose total consumption for the family of four with a gross income of $90,000 per year is $70,000, and that total consumption for the childless couple with a gross income of $60,000 per year is $50,000. In that case, one would conclude that the marginal child expenditures in the family of four with a gross income of $90,000 per year is $20,000, the difference between these two consumption figures. One could state marginal child expenditure as a proportion of net income. If, for example, the family of four in our illustration had a net income of $82,000 per year, then the child expenditures of $20,000 would constitute 20/82, or 24.4 percent, of net income.[96] One can imagine repeating such calculations over a wide income range and for families of varying size to produce proportions of net income spent on children for a full array. These calculations can be treated as data points on a curve, smoothed to allow the construction of the familiar child support grid. The adjustments made to achieve this smoothing, as well as some other adjustments, can be put aside at this point. One complication worth noting, however, is that the number of families surveyed in any one year may be too small to provide reliable figures once the total number is broken into families of different size and income. This problem is solved by aggregating data collected over a three-year period.

This process obviously requires data that shows expenditure patterns broken down by family composition and income, and the CES is the only source of such information. The CES has been conducted in various forms and at various intervals since 1888, when it provided

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[93] See Yenohr and Griffith, *Economic Basis* (cited in note 9).

[94] Id.

[95] *Id.*

[96] According to Jane Venohr (telephone conversation with the author, December 23, 2003), PSI relies on figures Betson provides, that state the average parental expenditures on children, within each income group, as a percent of average total consumption expenditures in that income group. It then reduces these percentages by figures Betson also provides for the expenditures by income group on child care, and on child medical expenses (also stated as a percent of average total consumption). PSI then multiplies this adjusted consumption percentage by yet another figure Betson provides, for average consumption as a percentage of average net income, for each income group. This final calculation is PSI's estimate of child expenditures as a percentage of net income, for each income group. The Betson-provided figures are in Venohr and Griffith, *Economic Basis* at Appendix I, Table 3, at page 13 (cited in note 9).

information for tariff negotiations with Europe.[97] It assumed its current form in the 1972. Panels (groups of individuals who are surveyed periodically) are formed from a national probability sample of American households.[98] Panel members are interviewed five times each, at three-month intervals.[99] The first interview forms a baseline; the four that follow provide data for the survey.[100] This interview component of the CES is meant to collect information on recurring expenditures, such as rent or insurance.[101] One might assume that panel members are more likely to remember the cost of such regularly recurring items more accurately than they remember the cost of items with changing prices. Nonetheless, the interview component is not limited to such recurring purchases. While there is also a diary component of the CES survey, in which respondents are asked to keep a written record of certain expenditures as they occur,[102] the interview component covers up to 95 percent of all expenditures, and appears in some regards to be more accurate.[103] One can nonetheless imagine why interview data of this kind might be incomplete or inaccurate in certain respects. Depending upon the use to which it is put, any particular flaw may have more or less importance. I consider below several flaws that seem likely to affect its use for constructing child support guidelines.

B. Underreporting of Income in the CES Data

The CES has a recurring difficulty with panel members underreporting their income. In general, only data from "complete income reporters" is used in the compilations discussed here, in Betson's and PSI's calculations, and in many of CES's published tables. But a household is classified a "complete income reporter" so long as it provides at least one major

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[97] Geoffrey Paulin and David Ferraro, *Imputing Income in the Consumer Expenditure Survey*, 117 Monthly Labor Rev No 12 23, 23-24 (1994).

[98] The description here of the survey methodology is taken from Geoffrey Paulin and Yoon G. Lee, *Expenditures of Single Parents: How Does Gender Figure In?*, 125 Monthly Labor Rev No 7 16, 18-19 (2002). Paulin is a senior economist in the BLS's Division of Consumer Expenditure Surveys.

[99] Id.

[100] Id.

[101] Id. and see <http://www.bls.gov/cex/home.htm#overview> (visited April 12, 2004).

[102] The diary component has participating families record expenditures for two consecutive weeks. Paulin and Ferraro, 125 Monthly Labor Rev at 30 (cited in note 97).

[103] The "interview [component] collects detailed data on an estimated 60 to 70 percent of total household expenditures. In addition, global estimates, that is, expense patterns for a 3-month period, are obtained for food and other selected items. These global estimates account for an additional 20 to 25 percent of total expenditures." Paulin and Lee, at 32, n 30 (cited in note 76), quoting Bureau of Labor Statistics, *Consumer Expenditure Survey 1996-1997*, Report 935, 256 (Sept 1999). The percentage of "incomplete" income reporters is higher in the diary component than in the interview; it is thought by some that respondents may be more willing to report income in the interview, where the income questions are not posed until after the demographic and expenditure questions have been answered. Paulin and Ferraro, 125 Monthly Labor Rev at 30 (cited in note 97).

source of income for at least one household member.[104] Published accounts show that in most years, between 85 percent and 90 percent of respondent households are classified as complete income reporters by this definition.[105] Yet, a household that fails to report additional earnings by the household member for whom a major income source is reported, or which omits even "major source" income earned by other household members, is still classified a "complete reporter" because a major income source has been reported for one household member. It is widely believed, therefore, that underreporting is common even among "complete reporter" households. Moreover, after 1994, complete income reporters began declining as a percent of all households, falling to between 75 and 81 percent between 1995 and 2001.[106] One indication of this income-underreporting problem is that the CES shows expenditures in excess of reported income for about half the respondents—those in the lower half of the reported income range.[107] In any given year, of course, a household may spend more than its income by incurring debt or spending down capital, but an excess of expenditures over income for half the population, that persists for decades, cannot be explained in this way.[108] Thus the general belief

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[104] Id at 24.

[105] Id at 25.

[106] Email to the author from Geofrey Paulin, Senior Economist, Bureau of Labor Statistics, April 21, 2004, on file with the Chicago Law Forum. Beginning in 2002, respondents were offered the choice of saying their income fell within a bracketed range, rather than providing an exact figure for it. In that year complete income reporters were 82% of all households. Id.

[107] Id. The authors report this result consistently for families in the lower two quintiles from 1980 on, the earliest year for which they compile this data. Paulin and Ferraro, at Chart 2, page 26 (cited in note 97). For the third quintile—those between the 40th and 60th percentile in reported income—the reported average income hovers around or just above the reported expenditures. The most recently available data shows that mean reported expenditures exceed mean reported income (net of reported income taxes) for all households with mean reported gross incomes below $40,000. Households in the $40,000 to $50,000 gross income range report a mean net income only slightly above mean expenditures, suggesting that the net income and expenditure lines cross somewhere in the middle of this group. Bureau of Labor Statistics, Consumer Expenditure Survey, Current Tables, Table 2, *Income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey* (2002), available at <http://www.bls.gov/cex/2002/Standard/income.pdf> (visited Dec 12, 2003). The range of incomes for the middle quintile of households is $28,344 to $46,506. See Table 1. *Quintiles of income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2002*, available at <http://www.bls.gov/cex/2002/Standard/quintile.pdf> (visited Dec 12, 2003). It thus appears that the point at which the expenditure and income lines cross is near and probably above 50th percentile in the income distribution. All CES tables including these two are accessible through links at <http://www.bls.gov/cex/home.htm#> (visited Feb 2, 2004).

[108] Unemployed persons presumably spend down capital regularly, and would thus report expenditures in excess of income, but they are not half the population. Some portion of retired persons may be spending down capital as well, although many of these will not be couples, and thus will not figure in the comparative analysis that PSI undertakes in its implementation of the Rothbarth equivalence scale. Students who pay tuition with funds received from their parents may have expenditures including tuition, greater than income, depending upon whether they receive payments from their parents regularly, or in single payment lump sums. (BLS treats regular payments as income to the students, but not lump sum payments, which are treated as "contributions" from their parents.) Email to the author from Geoffrey Paulin, April 21, 2004 (on file with the University of Chicago Law Forum). Again, these students will not usually figure in PSI's analysis because they will not usually be couples.

among researchers, including economists at the BLS itself, is that income is systematically underreported in the CES data set.[109]

PSI is fully aware of this problem.[110] But their report to Arizona says they make no adjustments to deal with it because there are "no theoretically-based methods to adjust income for this problem."[111] Yet the same page of their report describes the adjustments they do make to deal with this income discrepancy.[112] Recall that for each income range, PSI multiplies Betson's figure for child expenditures, expressed as a proportion of total consumption, by total consumption as a proportion of net income.[113] This gives a measure of child expenditures as a proportion of net income. The problem, however, is that income underreporting is such a massive problem in the lower income categories that even though total consumption is only a subset of total expenditures, it still exceeds reported net income in the bottom five of PSI's fourteen income groups, thus producing ratios greater than one.[114] Calculations using these ratios would therefore yield child expenditures figures that are even higher, as a percent of net income, than as a percent of consumption. The consequence would be support guidelines that set extraordinarily high support obligations for obligors in the lower 40 percent of the income distribution.

PSI (through Professor Betson) avoids the most extreme results by arbitrarily capping the ratio at one, for the five lowest income groups.[115] Because data from the sixth group yields a ratio of .999, it is not affected by this cap. Yet a ratio of .999 is also not possible unless the group's average *expenditures* (necessarily greater than its *consumption*) is more than its income. In short, there is a serious problem of income underreporting for at least six income groups out of fourteen, or 42 percent of the income groups, and this data defect affects PSI's child support calculations. Capping the ratio at one ameliorates but does not solve the problem. PSI's calculated child expenditures for these six groups vary from 33 percent of net income, to 36.78 percent, at the lowest income level.[116] The eight higher income groups are all much

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[109] See Paulin and Ferraro, 125 Monthly Labor Rev at 23, 24 (cited in note 97). See also email to author from Professor Claire Brown, Department of Economics, University of California, Berkeley [on file with U Chi Legal F].

[110] See Venohr and Griffith, *Economic Basis* at Appendix I, 3 (cited in note 9) ("Staff at the Bureau of Labor Statistics . . . suggest that income reported in the CEX is too low relative to expenditures.").

[111] Id.

[112] Id.

[113] See note 62.

[114] See Venohr and Griffith, *Economic Basis for Updated Child Support Schedule* at Appendix I, Table I-3 (cited in note 9).

[115] Id.

[116] Id.

lower.[117] The consequence is very high child support awards, in relation to income, for the six lowest income groups. The concern is that these high awards do not reflect disproportionately high spending on children by these income groups in the real world, but are instead an artifact of defective income data for these groups, such that given levels of marginal child expenditures are associated, in the data, with income levels that are lower than in fact they are.

It appears that income underreporting is probably less of a problem with the eight higher income groups.[118] Of course, the fact that for these groups expenditures do not exceed income does not necessarily mean that income is not underreported. The savings rate at higher incomes could be large enough that reported income could be below actual income but still higher than reported expenditures. This result is even more possible if expenditures are also underreported. Indeed, we shall see below that there is reason to think that at the higher income levels, expenditures are disproportionately underreported. Ultimately, given PSI's methods, what matters most is the relative proportions of underreporting of income as compared to expenditures. For the lower 42 percent of the income distribution, the problem appears serious because it seems likely that income is disproportionately underreported. Moreover, we shall see below in Part III C the opposite problem - serious and disproportionate underreporting of expenditures - seems to occur in the upper 20 percent, with the result that estimates of child expenditures are off in both groups, but in opposite directions.

For some time PSI has recommended child support orders that are a much higher percent of income at the lower income levels than at the higher levels, on the basis of its conclusion that this regressive schedule reflects actual expenditure patterns in intact families. Its most recent reports enlarge the gap by recommending increases in the support obligations of low-income obligors, and reductions in the support obligations of high-income obligors.[119] Yet, beginning with Espenshade, observers have generally agreed that marginal child expenditures are a fairly constant percentage of total *expenditures* across a very wide income range.[120] PSI does not take issue with this observation. Its conclusion that marginal child expenditures decline precipitously with rising *income* derives instead from its reliance upon CES data that shows a steep drop off in expenditures as a percentage of income as income

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[117] Id.

[118] One study has shown that if the survey respondents are divided into seven groups according to their level of reported expenditures, the two lowest are significantly more likely than the rest to be "incomplete income reporters," in BLS's terminology. While this also does not necessarily mean that the complete income reporters in the low expenditure groups are underreporting income at a higher rate than other respondents, it is suggestive. Thesia Garner and Laura Blanciforti, *Household Income Reporting: An Analysis of U.S. Consumer Expenditure Survey Data*, United States Department of Labor, Bureau of Labor Statistics Working Paper 255, 13 (July 1994).

[119] See Venohr and Griffith, *Economic Basis* at 14 (cited in note 9) (stating that "the more recent Betson-Rothbarth estimates indicate a greater decline" in expenditures as a proportion of income, as income rises).

[120] Thus, reports of marginal child expenditures as a percent of all expenditures are generally reported by family size but not by income or expenditure level. See, for example, Venohr and Griffith, *Economic Basis* at 8 (cited in note 9).

rises. We have now seen that this drop off results in important part from the fact that the CES disproportionately underreports income for nearly half of all households — those in the lower half of the income distribution. The next Subpart examines the expenditure data in the CES, and explains why the opposite problem seems likely for the upper fifth of all households.

C. Underreporting of Expenditures in the CES Data

While CES data shows expenditures exceeding income for the lower half of the earnings distribution, it also appears that, as a general matter, expenditures are underreported. A study by a BLS economist compared expenditures as reported in the CES with data on expenditures from producers ("PCE") on the market value of goods and services purchased.[121] Because the CES and PCE sources do not employ precisely comparable classification schemes, she made adjustments for some comparisons, and could not make comparisons of all goods and services.[122] Nonetheless, she obtained reasonably good comparisons for many consumption categories.

> The ratios indicate that CE [Survey] estimates for almost all categories of consumption are lower than PCE estimates. PCE data are based mostly on administrative and establishment data, which we expect to be more complete, whereas CE [Survey] data are collected via a household survey, which is subject to underreporting. In addition, the lower CE estimates may reflect broader population coverage in the PCE.[123]

CES data on expenditures for rent, and the purchase price of automobiles, are quite close to the PCE data; it seems plausible to think that these items would suffer relatively less from problems of recall in the CES interviews. By contrast, CES reports on things like purchases of food, entertainment, and personal care products fell well below the levels reported in the PCE. Of perhaps particular concern, given PSI's use of the Rothbarth equivalence scale, is that for the four-year period for which these comparisons were made, CES estimates for clothing purchases were between 80 and 85 percent of the PCE estimates.[124]

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[121] E. Raphael Branch, Monthly Labor Review 47, at 48-49.

[122] Id.

[123] Id at 48.

[124] The item breakdown is provided in Branch's paper. See id at 49, Table 1. The category that includes clothing also include services related to clothing, such as laundry and dry cleaning. The traditional consumption category employed in implementing the Rothbarth measure of "adult expenditures" was not adult clothing but alcohol and tobacco. Not surprisingly, perhaps, Branch's study shows that expenditures on these items are among those most significantly underreported in the CES.

There is reason to think that underreporting of expenditures presents a particular problem with upper income families, for whom the CES data implies highly implausible savings rates. Consider, for example, the CES data on households whose reported gross income falls between $70,000 and $90,000.[125] The mean gross income of this group (before income taxes) is $78,619; mean income after income taxes is $73,971.[126] All remaining taxes (such as FICA and property taxes) are included among the CES expenditure categories, as are contributions to pension plans. Total expenditures for this group, (which thus includes other taxes and pensions) average $60,740.[127] To find true figures for after-tax income, one needs to deduct FICA from the CES income figures, and then also exclude it from expenditures.[128] If one assumes a mean FICA payment of $5,500 for this group, then its mean net after-tax income is $68,471, and expenditures are $ 55,240.[129] This leaves a gap of $13,231-the difference between the mean after-tax income and the mean total expenditure—unaccounted for. One might guess that about $2,350 of this gap is explained as underrreporting of income taxes paid.[130] That assumption leaves a gap of $10,881. Because CES purports to record all expenditures, the implication is that households in this income range are on average saving $10,881 annually, *not* including pension contributions (because those have already been counted as expenditures by the CES). This implied dollar savings of $10,881 (beyond any pension contribution) is 16

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[125] Bureau of Labor Statistics, Table 7050, Income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2001-2002, available at <http://www.bls.gov/cex/2002/highincome/hincome.pdf> (visited Dec 5, 2003). Links to most BLS tables, including this one, are available at <http://www.bls.gov/cex/home.htm> (visited Feb 2, 2004).

[126] Id.

[127] Id.

[128] Id.

[129] CES reports that this income group "spends" an average of $7,589 on FICA plus pension contributions. The current FICA rate is 7.65% on the first $87,000 of employee wage earnings; some forms of income, such as interest or capital gain income, produce no FICA tax. The estimate of $5,500 assumes that some of this group's mean income is not subject to FICA, and that some of the reported expenditures in this category constitute pension contributions.

[130] CES of course relies on the respondents' self-report for their figures on both income and income taxes paid. For the $70,000 to $90,000 group, the CES figures show a mean personal taxes of $4,648 on the mean average income of $78,619, which includes federal, state, and local taxes. That is an effective average tax rate of 5.9 percent. According to the Congressional Budget Office, the effective average federal income tax rate, under the 2000 tax law, for families with children with a mean income of $83,100, is 7.1 percent. See Congressional Budget Office, *Effective Federal Tax Rates, 1979-1997*, Tables, Tables G1a, G1c, G-2c (2002), available at <http://www.cbo.gov/showdoc.cfm?index=3089&sequence=11#tableG-2a> (visited Dec 9, 2003). (If one looks at CBO data for all households, rather than at just households with children, one finds that for households in the fourth quintile, with a mean income of $65,600, the average effective income tax rate is also 7.1 percent. It seems unlikely to be so very different for those in the income group examined here. See Tables G-1a and Table G-1c.) A rate of 7.1 percent would yield an income tax liability of $5,582. To that must be added state and local income taxes. If those are a quarter of the federal taxes, about $1,400, then we would have a total tax liability of $6,982, or $2,350 more than reported in the CES.

percent of net income. Such a savings rate is implausible.[131] There is no similar gap between income and expenditures at a lower-income levels (indeed, as explained above, the gap is in the opposite direction), further suggesting that the problem of expenditure underreporting is particularly acute for higher-income families. One possible explanation for this difference is that upper-income households average more members, and there is evidence that expenditure underreporting generally rises with household membership.[132]

Expenditure underreporting yields lower estimates of child expenditures, and thus lower child support guidelines.[133] If there is disproportionately more expenditure underreporting in higher income households, the result will be disproportionately—and erroneously—lower estimates of child expenditures at this end of the spectrum. It thus seems likely that this distortion in the CES data accounts, at least in part, for PSI's conclusion that higher-income households spend a much lower percentage of their income on children than do lower-income households.[134]

Some CES practices complicate the analysis of expenditure reporting. The CES counts the full purchase price of big-ticket items—cars, appliances, and the like—as expenditures in

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[131] *The Economic Report of the President*, Table B-30, Disposition of Personal Income, 1959-2002 (Feb 2003), available at <http://w3.access.gpo.gov/usbudget/fy2004/pdf/2003_erp.pdf> (visited Feb 2, 2004), reports personal savings as a percent of disposable income; the rate varies considerably by each calendar quarter, but within a range, for 2001-2002, of .08 to 4.0 percent. It defines savings as "personal income less personal tax and nontax payments." The report also shows a net household savings rate of 4 percent; this includes contributions to both employer pension plans and individual retirement accounts, as well as investment in owner-occupied housing. The first two have already been accounted for in the calculations in the text; the savings rate implied by the CES data would be in excess of any pension contributions. See id at 193, Table 5-1.

[132] Studies of recall surveys of expenditures in other countries suggest that underestimates of expenditures will be greater in larger households, because they will have more transactions per time period, which tends to increase the risk of underreporting. John Gibson, *Why Does the Engel Method Work? Food Demand, Economies of Size and Household Survey Methods*, 64 Oxford Bulletin of Econ and Stats 341, 345 (2002) (describing other studies). CES reports that consumer units with household incomes between $70,000 and $90,000 average 3.1 members, which is greater than the average number in all the lower income households—often, much greater. BLS Table 7050, n 70 (cited in note 124).

[133] As explained above, PSI determines consumption by making certain subtractions from total expenditures. If the expenditure figures were proportionately higher, then the dollar amount of the difference between childless couples and families with children would be greater, and so thus would the dollar amount of the estimated child expenditures.

[134] The tendency of guidelines to specify lower percentages of income at higher income levels seems to be both widespread and longstanding. In the early 1990's Bassi and Barnow reported that of thirty-three income shares states, in fourteen the percentage of income paid for support steadily declines as the aggregate parental income increases, while in sixteen the percentage first increases but then declines at high income levels. In only three states did the percentage remains substantially constant over the full income range. They concluded from this data that the guideline amounts have only a "loose" relationship to empirical estimates of expenditures on children. Bassi and Barnow, 12 J Pol Anal & Manage at 487-88 (cited in note 15).

the year of purchase, even if purchased on an installment contract.[135] This presents no problem when expenditures are averaged over many families, but it does mean that one cannot also count the full amount of installment payments on auto loans without double-counting, since the payments include principal, as well as interest. Therefore, the CES excludes the principal portion of vehicle loans from the expenditure data. To do this, they just estimate the principal component of the loan payment reported to them by the survey respondent. The remaining interest portion is then reported in the CES data as "finance charges".[136] PSI adjusts the CES expenditure data by excluding the purchase price of automobiles entirely; it does include the finance charges.[137] These adjustments exacerbate the underreporting problem. Cars purchased for cash are omitted entirely from PSI's expenditure data, and PSI therefore concedes that the effect of its method "may underestimate total expenditures."[138] But even cars bought on installment are underreported, since neither the purchase price nor the principal portion of the installment payments are included in PSI's consumption figures. In contrast to home mortgages, principal ordinarily forms by far the largest part of each car loan payment (because cars are paid off over such a shorter period), so this omission is not unimportant.[139] One might argue that the true consumption cost of an automobile is the purchase price less its resale value at the time it is sold or abandoned, rather than the full purchase price.[140] But even if the full purchase price is not appropriately part of consumption, clearly a large portion of it is. In any event, it seems that PSI's adjustments further reduce the proportion of net income treated as consumption, thus reducing further its estimate of marginal child expenditures. For the lowest of its fourteen income groups, PSI estimates household consumption as 265 percent of *net*

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[135] See *Consumer Expenditures in 2002*, United States Department of Labor, Bureau of Labor Statistics, Report No 974 1, 4 (2004), available online at <http://www.bls.gov/cex/csxann02.pdf> (visited April 12, 2004).

[136] Unlike most entries in the CES, here the BLS does not rely on respondent self-reports for the breakdown between principal and interest:

Here's my understanding of the vehicle expenditure data: In Section 11B of the Interview survey, data regarding the terms of the vehicle loan are collected. These include the amount borrowed (principal only), the number of payments contracted for, the length of the payment period (weekly, monthly, etc.), and whether the payment includes things other than principal and interest, such as insurance. From these data, the principal and interest portions of the loan are calculated (rather than obtained directly) and included in the survey results.

Email to the author from Geoffrey Paulin, Senior Economist, B.L.S., December 10, 2003 [on file with U Chi Legal F].

[137] The author does not know whether PSI makes similar adjustments to major appliance purchases.

[138] Venohr and Griffith, *Economic Basis* at Appendix 1 (cited in note 9).

[139] Id at Appendix 1, 6-7.

[140] It appears that BLS reports the "net" price of a car as the purchase price less the trade-in value that the dealer allows the purchaser for their existing car. However, if the car buyer does not trade in the car, but sells it privately or disposes of it in any other way (such as by gift to child), its value is not netted against the purchase price of the new car. Apparently survey respondents are asked about such sales or transfers, but their responses are not used to adjust the cost of the new car. Email to the author from Geoffrey Paulin, senior economist, B.L.S., December 14 and 15, 2003 [on file with U Chi Legal F].

income, but for the highest income group it is only 58 percent. Indeed, consumption, as calculated by PSI, is 75 percent or less of household *net* income for families with net household incomes of $60,640 per year or more.[141]

Another gap in the CES expenditure data has particular relevance to PSI's choice of the Rothbarth equivalence scale, which determines child expenditures by equating families with similar expenditures on adult clothing. While the CES reports expenditures on adult clothing separately from expenditures on children's clothing, for this purpose it puts clothing purchases for seventeen and eighteen year olds in the adult grouping.[142] The uncorrected CES data thus inflates the expenditures on adult clothing for families with older teenagers, and would lead the Rothbarth scale to equate the living standard of childless couples to families with children that have lower incomes than one would find if the clothing reports were accurate. Betson is aware of this problem and attempts to correct for it. Using publicly available CES microdata, he reduces reported "adult clothing" expenditures in families with seventeen and eighteen year olds by the clothing expenditure he attributes to these older teenagers. The attribution is simply per capita, so that, for example, adult clothing expenditures are reduced by one-third for families consisting of two parents and a seventeen-year-old child.[143] It is difficult to know

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[141] Venohr and Griffith, *Economic Basis* at Appendix 1, 4 (cited in note 9). PSI also follows the CES in excluding as an expenditure the principal portion of home mortgage payments. See id at 6-7. For most purposes, principal payments can reasonably be regarded as a form of savings rather than consumption, but their exclusion from the expenditure data is probably inappropriate for the purpose of child support guidelines. The purpose of the child support system is to require the noncustodial parent to contribute a fair proportion of the custodial household's expenses. Those periodic expenses include the full amount of mortgage payments. If we were to ask: how much more do parents pay monthly on housing on account of their children?, we would answer with the full difference in the mortgage payment incurred to buy the bigger house, or the house in the better school district. The principal portion of mortgage payments is typically small in the early years of any loan, so this factor seems unlikely to contribute significantly to lower guideline figures, but it does illustrate the problem with relying on ordinary economic conventions rather than on child support policy choices in making fundamental decisions about support guidelines.

[142] *Record of Your Daily Expenses*, United States Department of Commerce, Bureau of the Census, Form CE-801 1, 7 (2004), available online at <http://www.bls.gov/ce/csx801p.pdf> (visited April 12, 2004) (where the Bureau of the Census is acting as collecting agent for United States Department of Labor, Bureau of Labor Statistics).

[143] See id at Appendix I, 4. Actually, PSI's explanation of the adjustment is unintelligible, but implies that clothing expenditures for twelve year olds is used to estimate the expenditures on older teenagers. The author wrote Professor Betson to obtain clarification, since PSI here relies on his calculations. Professor Betson replied:

> In an attempt to correct for this problem, in families where there were children 16 to 18, I proportionately allocated (on a per capita basis) adult clothing to the adults (parents) and the children (aged 16 to 18). But remember in the Rothbarth estimating scheme, the amount spent on the children is not what being used but the amount being spent on adults. By examining how parents reduce the expenditures upon themselves due to the presence of children we can estimate how they spend on the children. But this 'correction' still did not fully rectify the problems in estimating the costs of children aged 16 to 18 (the results indicated that didn't cost any thing) and provide an estimate over the full 18 years, I attributed the costs of 13 to 15 years olds to the older children on the assumption the problems that I was having estimating the 16 to 18 year olds was attributed to this allocation problem. I guess I have not read the portion of the PSI report

whether this per capital attribution is correct; one can imagine reasons why it might be too low or too high. Yet because total dollar amounts of clothing expenditures are very small, relative to total consumption - approximately 2 percent, depending upon the composition and income of the household — estimating errors of just a few hundred dollars could have a very large impact on the Rothbarth analysis.[144]

D. Conclusion

PSI uses the CES data because it believes it has no better alternative source. I certainly have none to suggest. There are other sources of income data and expenditure data, but for the construction of support guidelines using PSI's methodology, one requires a dataset that connects them. While the CES data may be the best available, it has problems that pose a particular challenge for its use in the construction of child support guidelines. Both income and expenditures are underreported, but it appears that income is disproportionately underreported in the low-income groups, while expenditures are disproportionately underreported in the high-income groups, so that guideline recommendations are distorted at both ends of the scale, but in opposite directions. Clothing expenditures are systematically underreported, a particular problem when relying on the Rothbarth estimator, and clothing expenditures for seventeen and eighteen year olds are aggregated with adult clothing expenditures, a potentially significant source of distortion given the small dollar amounts involved. PSI attempts to deal with some of these problems, but even when it does, it is not clear that its adjustments always help. The fluctuation over time in child expenditure estimates is one possible sign of data problems. Whether one uses the Engel or Rothbarth scale, Betson's estimates of parent's expenditures on

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you have noted in your message. Hopefully this answers your questions.

Email from Professor David Betson to the author, December 2, 2003. The author initially understood this email to mean that Betson assumed that expenditures on clothes for children aged thirteen to fifteen, available in BLS microdata, was on average equal, per capita, to that for children sixteen to eighteen, and thus adjusted adult clothing expenditures for families with older teenagers by subtracting these inferred expenditures on them from the reported amount for adult clothing. The author replied to Professor Betson on December 4 seeking confirmation of this understanding, but received no reply. Later, Jane Venohr of PSI offered her view that Professor Betson in fact made the adjustment with the method described in the text. Telephone conversation with Jane Venohr, December 23, 2003. The author has had no response to an email to Professor Betson on December 29, 2003, asking for confirmation of this revised understanding, but has relied upon Dr. Venohr's explanation.

[144] For example, households with household incomes between $60,000 and $70,000 report expenditures on apparel and "apparel services" (dry cleaning and like) that averages, in total, $1,300 for household member sixteen years or older. Total apparel expenditures, including children, is $2,395. The amount spent on adults—those younger than 18-is presumably between these numbers. See BLS Table 7050, *Income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2001-2002* (cited in note 124).

their children, as a percent of total family expenditures, have declined in recent years.[145] It seems implausible that parental practices have changed very much over the two decades for which such estimates have been made. It is possible that there is a fluctuation in the cost of child-related expenses relative to other expenses, but it is certainly not obvious that this is so. It would be useful to determine the source of these declining estimates in the data, but such an effort is beyond this Article's scope.

Defects in the CES data are a problem not only for those who use the PSI methodology for construction of support guidelines. Those who wish to adopt an equal living standard approach or an ALI approach confront similar problems, because the data defects undermine one's ability to use any of the conventional methods for deciding the incomes at which families of different compositions enjoy equivalent living standards.

CONCLUSION AND RECOMMENDATIONS

Any revision of child support guidelines presents the potential for a contest between feminist and father's right groups. With this potential for gender wars always lurking, there is an obvious appeal to resolving at least the fundamental question - the numbers put in the guideline grid - by reliance on a seemingly neutral principle (continuity-of- expenditure) and upon neutral technical experts who implement that principle through the application of a value-free methodology. The message of this Article is that the apparent availability of this choice is an illusion. It is an illusion because the proffered principle, more accurately labeled continuity-of-marginal-expenditure: (1) is not neutral, (2) is not coherent (because it does not reflect any consistent vision of child support policy), and (3) the method employed for implementing this flawed principle - the equivalence scale - is empirically unverifiable, theoretically questionable, and made operational by reliance upon flawed data, the defects of which are typically hidden from policymakers by an impenetrable barrier of technical jargon.

Those responsible for drafting child support guidelines must confront the fact that their task has no value-neutral, objective "answer." Any set of child support guidelines necessarily

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[145] See Venohr and Griffith, *Economic Basis* at 11 (cited in note 9). The PSI Arizona report, shows these estimates of average childrearing expenditures as a percent of total family expenditures:

Estimate and Data Source	Number of Children:		
	One	Two	Three
Betson-Engel (1980-86 data)	33%	49%	59%
Betson-Engel (1996-99 data)	30%	44%	52%
Betson-Rothbarth (1980-86 data)	25%	37%	44%
Betson-Rothbarth (1996-99 data)	25%	35%	41%

expresses a view about the appropriate tradeoffs in the legitimate interests of the affected parties. In the usual case, there is no child support order that can satisfy the maximum reasonable claims that can be made on behalf of the obligor, the obligee, and the child. The question, therefore, is necessarily how to balance the shortfall in expectation that each of these parties is likely to experience, in a way that is fair and which implements appropriate public policy.

A child support committee must confront this basic question in a systematic and informed manner. The consultant should be a tool available to the public body entrusted with preparing the guidelines, not the formulator, overtly or by default, of the basic policy decisions. At the same time, the preparation of support guidelines must be undertaken with appreciation of its inevitably inexact nature. Not only conceptual challenges, but also limitations in the available data, ensure that truly accurate estimates of parental expenditures on children, much less precise comparisons of the living standards of the two post-divorce households, are simply not possible. This does not necessarily mean that reformed or improved versions of existing estimation practices are worthless, but it does mean they must be employed with great caution, with an understanding of their inadequacies, with sensitivity to their underlying assumptions, and only as one tool in a larger arsenal, not as an "objective truth" that compels particular numbers in a child support grid. And most certainly, any use of these methods must be informed by policy judgments about which kind of errors are most important to avoid and which kinds can be better tolerated, as well as by common sense.

There is also a need to bring additional kinds of data to bear upon the guideline writing process. The limitation of the CES is not only that the data has flaws that can distort estimates of parental expenditures on children based upon it, but also that it cannot tell us anything else. The two primary policy imperatives that any set of support guidelines ought to further are child welfare and fairness in the allocation of the support burden between the child's parents. What is needed is more data that bears directly on these two concerns. First, we need to know more about the extent to which child welfare depends upon support payments. The literature on that subject is relatively sparse. It has not been surveyed in this Article, and the existing literature may not be fully adequate to this task.[146] But what is available ought to be consulted, and if there are gaps in that literature, researchers should be encouraged to fill them. Everyone intuits that a child's welfare is importantly compromised by poverty; most assume that it is advanced by affluence. But the precise contours of the money—child welfare function cannot be intuited. It seems likely, however, that the relationship is neither linear nor infinite. Certainly, if the curve becomes less steep at higher income levels, and flattens entirely at some point, that is an important fact that need be taken into account by whatever public agency is responsible for writing support guidelines.

Second, we need to think more about fairness as between the parents. As noted in the beginning of this Article, that concern can cut in both directions, depending upon the nature of the case. It is obvious that fairness to the obligor parent places some limit on the size of the

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[146] For a glimpse of this literature, see the sources cited in note 11.

support order we might otherwise impose upon him in order to vindicate child welfare concerns. But it is also true that fairness to the custodial parent might justify support payments even when they are not essential to child welfare (as where the custodial household can provide a reasonable environment to the child unassisted). In the latter case, we still require payment from the other parent, not because it is necessary for child welfare, but because it is unfair to impose the entire cost of providing for the child on the custodial parent. But there may be some cases in which such fairness concerns cannot entirely fill the justification gap left by the missing child welfare rationale. The case of the custodial parent who remarries, and whose new spouse has considerably more income than the support obligor, may be a case in point. Support obligors often feel keenly that it is unfair for the law to ignore this newfound prosperity of the custodial household in fixing parental obligations, as it usually does. Cases in which the custodial parent's income is considerably greater than the support obligor's provide another example in which the norms expressed by the typical guidelines may be inconsistent with the beliefs of the parties themselves, who often agree in such cases to forego all but nominal or symbolic support payments. While fairness is usually regarded as a philosophical inquiry, views about the fair result held by the parties to the process cannot be ignored by the policymaker, and child support guideline writers would benefit from more systematic knowledge about them. Such data need not be limited to specific questions such as the impact of the custodial parent's remarriage. It can also address broader questions: psychological data, as much as economic data, may be able to help us compare the relative living standards of different households. There is some data now on these kinds of issues, but more is needed.

To the extent the preceding paragraphs suggest research, they are not helpful to a public body charged with preparing guidelines today. But there are lessons here with immediate relevance. In particular, the following specific recommendations for any guideline-writing committee seem to follow from what we have learned in this inquiry:

1. The committee must start by making sure all of its members understand the nature of the inquiry and the limitations of available knowledge. In particular, it is important that everyone understands the following:

A. The economic reports traditionally provided to guideline committees do not purport to provide estimates of the cost of raising children, and child support guidelines have not been based on cost estimates.

B. The traditional economic reports do provide some information on what parents in intact families spend on their children, and about the relative economic welfare of the custodial and noncustodial households, but their estimates are necessarily imprecise, and dependent upon decisions, ultimately untestable, about how to allocate expenditures among household members, which equivalence scale to use, and upon informed guesses (at best) about how to compensate for unavoidable limitations in the available data.

C. Child support guidelines necessarily and properly express a view about how to balance the legitimate claims of each of the parents and of the children, that in most cases all three parties must settle for a result that falls short of fully satisfying their legitimate claims, and that the committee's task is to decide upon guidelines that compromise the claims of all parties in a manner that is fair to all of them, and that takes account of relevant public policies, including, most importantly, the state's interest in protecting the welfare of minor children.

D. While there is no theoretical justification for basing support guidelines on marginal expenditures on children in intact households, as opposed to any other allocation of household's joint expenditures, comparisons of the relative economic well-being of the custodial and noncustodial household, if possible, would assist the committee in making judgments about the fairness of any proposed guidelines.

2. In carrying out its task, the committee should require the consultant to provide its best analysis of the relative economic welfare in the custodial and noncustodial households that will result from any particular set of guidelines under consideration, across a wide range of parental incomes and household sizes. The consultant's analysis should also provide the committee with a sense of the range within which plausible estimates of the relative household living standard may vary. An appropriate and effective way to do this would employ the familiar statistical tool of a sensitivity analysis, which shows how sensitive the estimates are to plausible changes in the assumptions upon which they are based, and by displaying not merely a mean estimate, but the full range of estimates that would result from the full range of plausible underlying assumptions. While the committee requires estimates of relative living standards to evaluate proposed guidelines, it also needs to know the plausible range of estimates so that it may give appropriate weight to this factor in light of its judgment about the relative harms of setting guidelines too low or too high. Committee members should be aware of the theoretical fragility of the various equivalence scales employed to make such comparisons, as well as the pragmatic accommodations traditionally made by economic analysts called upon to make them.

3. In carrying out the household comparisons required under Recommendation 2, and in preparing the guideline grid that relates the support obligation to parental income, the committee should seek, with the consultant's help, alternative methods for assessing the relative economic welfare of the parties before and after the child support payment required by any proposed guideline. One possibility that may be worth exploring would start by determining the household income that families of varying size require, in light of the local cost of living, to maintain living standards equal to each of several standard benchmarks (for example, lower middle class, upper middle class). Proposed sets of child support guidelines could then be assessed by comparing the incomes of the custodial and noncustodial households, after application of the guidelines, to these benchmarks, in order to assess the

fairness and adequacy of the child support order that proposed guidelines would yield in a variety of situations.[147]

4. To the extent that reliance upon traditional expenditure analysis is employed, the committee should instruct the consultant with respect to important methodological choices. For example:

A. Exclusive reliance upon the Rothbarth equivalence scale seems problematic. One possibility is to use a midpoint between the estimates returned by Engel and Rothbarth. This method is consistent with the conclusion of the most recent task force commissioned by the Department of Health and Human Services on estimating child expenditures in the construction of child support guidelines, which concluded that "the Engel estimates are likely to be an upper bound of the true expenditures on children, while the Rothbarth estimates are likely to be a lower bound."[148] Use of a midpoint, rather than exclusive reliance upon the Rothbarth method, also reduces the questionable reliance upon the adult clothing expenditure data that may undermine any

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[147] This suggestion may remind some of the Household Budgets that were once prepared annually by the Bureau of Labor Statistics. In 1978 the BLS commissioned an expert panel to consider revising its method for preparing these budgets, and the panel in fact suggested significant changes in methodology. Harold Watts, *Special Panel Suggests Changes in BLS Family Budget Program*, 103 Monthly Labor Rev No. 12, 3, 3-10 (1980). Ultimately the BLS abandoned the calculation of these budgets as a result of funding pressures, and the expert committee's suggestions were therefore never implemented. David Johnson, John Rogers and Lucilla Tan, *A Century of Family Budgets in the United States*, 124 Monthly Labor Rev No. 5 28, 33 (200l). However, the method suggested by the expert panel is not difficult to implement because its "Prevailing Family Standard" is based on the median spending patterns of the base family (a two-parent family with two children), Watts, 103 Monthly Labor Rev at 4 (cited in note 146), rather than upon expert assessments of the basket of goods that need be purchased by a middle-class family, and their cost, as was required by the prior methodology. The panel's approach is called a "descriptive" standard as contrasted with the previously used "prescriptive" approach, and Johnson, Rogers and Tan have calculated its value for several years, Johnson *et al supra*, 124 Monthly Labor Rev No. 5 at 29 and 36 (cited in note 146). One advantage of the expert panel's approach is the relative ease of calculating Prevailing Family Standards separately for separate localities, which they recommended. The suggestion in the text could be implemented by also calculating similar benchmarks at percentile points above and below the median. (The expert panel's calculated higher and lower standards were simply multiples of the "prevailing" standard.) Nonetheless, one still needs some method for comparing relative living standards between households of different size: there is obviously no reason, for example, to assume that the median two-parent family of four has the same living standard as the median single-parent family of three. On this point, the expert panel had little to offer. While it endorsed a particular method for calculating such equivalencies, it conceded that it had little confidence in it, endorsing it only because it saw no particular basis to pick any alternative. See the discussion in Johnson *et al*, *supra,* 124 Monthly Labor Rev No. 5 at 38. The problem of devising a non-arbitrary equivalence scale thus appears here as well. Note, however, that the equivalence scale problem would be avoided if one turned to BLS's original prescriptive methodology. Further thought on this possibility would thus appear worthwhile.

[148] Lewin/ICF, *Estimates of Expenditures on Children and Child Support Guidelines* at 2-31 (cited in note 8). As explained in the study's acknowledgments page, it was prepared of Burt Barnow and also included among its authors Laurie Bassi, Laudan Aron, and Abhay Pande. Monitors in HHS were involved in close review of this report at throughout, and the Department also established a highly qualified outside technical review panel to ensure that it accurately represented then-current research. It seems clearly the best comprehensive study of its kind.

implementation of the Rothbarth scale. A different alternative is to make use of the expenditure estimates prepared by the Department of Agriculture.

B. In converting between expenditures and income, the consultant must take better account of apparent defects in the CES data, in particular, the likelihood that income is disproportionately underreported in the lower income groups, and expenditures disproportionately underreported in the upper income groups. Except to the extent evidence on savings rates that suggests there is indeed an important decline in expenditures as a percentage of income as income rises through the middle part of the income distribution, the child support analysis should start from the assumption that expenditures on children are a constant percentage of net income across an income range likely to include the great majority of families whose incomes are actually represented on the grid. In the absence of persuasive reasons to the contrary, it seems difficult to justify a regressive child support schedule that imposes higher percentage obligation on lower-income obligors. Current economic reports do not meet this burden of persuasion because it is not sufficiently clear that the data on which they rely for justifying a regressive support schedule reflects actual behavior by parents, rather than artifacts produced by defects in the survey data.[149]

C. The consultant should examine available data on the relationship between household income and child welfare, to determine whether that data reveals any relationship between household income and child welfare. Such data, if available, can shed light on a variety of issues. These include: a) whether support guidelines should take into account the entire household income of the custodial parent, including the income of a new spouse and b) the income level above which child welfare concerns do not justify proportional increases in support levels.

D. The committee should consider the consultant's practice with respect to excluding certain expenditures from the accounting of household consumption. As a general matter the consultant should provide the committee with an inventory of all expenditures it proposes to exclude, in a manner that facilitates the committee's review of the appropriate policy with respect to these exclusions. Three categories of expenditures currently excluded in common consultant practice are noted in particular. First, the full cost of automobile purchases, and not just finance charges on automobile loans, should be counted. Second, the committee should consider whether it is appropriate to exclude the principal portion of home mortgage payments, given that the carrying charges required to live in the home include them. Finally, the current practice of excluding expenditures on life insurance is questionable: given that its primary purpose is to protect dependent family members from the financial consequences of a

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[149] For an early argument for this position, see Irwin Garfinkel and Margo Melli, *The Use of Normative Standards in Family Law Decisions: Developing Mathematical Standards for Child Support*, 24 Fam L Q 157, 168-70 (1990).

parent's premature death, most of the cost of life insurance is reasonably regarded as an expenditure on children.

E. In comparing the economic circumstances of the custodial and noncustodial households, attention must be given to the tax circumstances of each, and to child-related expenditures ordinarily incurred by noncustodial parents who exercise routine visitation. There is some evidence that the failure to consider these factors has sometimes distorted such comparisons.[150]

5. States employing income shares rather than POOI guidelines face a methodological problem if they use gross rather than net income guidelines. One must of course assume a tax rate in converting the net income figures upon which the support calculations are necessarily based, to the gross income figures contained in the guidelines. In a POOI state, in which the guidelines are based on the income of the obligor alone, rough estimates of the obligor's tax liability are relatively straightforward. In an income shares state, in which the guidelines are based upon the aggregate income of both parents, the result of any conversion depends upon the assumption one makes about the two parents' relative contributions to their aggregate income. The highest inferred tax liability arises if one assumes that all the income is earned by one parent. This is the assumption adopted by PSI for its Arizona recommendations, in implementing Arizona's decision to employ gross income guidelines. To the extent both parents earn income, the resulting grid yields a child support obligation that is lower than it should be (because it is assuming a higher tax rate, and thus a lower net income, than is in fact the case). PSI flags this problem in its report.[151]

Many income-shares states use net income.[152] This is certainly the more accurate approach. Net income guidelines can be implemented by applying a presumptive tax rate to the gross income of each parent, based on that parent's income and current family status, reserving for each parent the possibility of overcoming the presumption with evidence of a parent's special tax circumstances. Guidelines constructed in this manner would not be more difficult to apply, in most cases, than guidelines based upon gross income, and seem a better approach than gross income guidelines.

The construction of child support guidelines is a difficult task. Expert consultants can assist in that task, but they cannot perform it, because there is no technical expertise that resolves the conflicting, legitimate claims of the parties affected by any set of support guidelines. Resolution of that conflict is a policy judgment. In making that policy judgment, those charged with the responsibility for writing child support guidelines can make use of

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[150] See Braver and Stockberger, *Child support guidelines and the equalization of living standards* (cited in note 36).

[151] See Venohr and Griffith, *Economic Basis* at Appendix 1, 11-12 (cited in note 9).

[152] For a compilation, see id at 11.

expert assistance, but they must also understand the limits that available data and methods place on the usefulness of the expert advice available to them.