Intuitive Lawmaking II: The Relationship Between Principles and Cases

by

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I. Introduction

Some legal rules yield binary results: guilty or innocent; liable or not. But many legal rules instead yield an allocation of finite resources among competing parties that is not necessarily all or nothing. The allocated resource is most often money (as calculating damages in a contract or tort action), but not always (as in allocating parental time between separating parents). These allocative legal rules require tradeoffs among the parties.

When asked to make such tradeoffs in particular cases, do ordinary citizens (told to imagine themselves as judges applying whatever rule they believe appropriate) produce coherent results that appear to reflect some consistent set of principles across cases? In an earlier paper, we examined that question by looking closely at the child support amounts favored by a sample of citizens over a series of hypothetical cases (Ellman, Braver & MacCoun, 2009). We found considerable dispersion among our respondents in the absolute amount of child support they favored in any given single case. At the same time, however, we found that the case-to-case adjustments respondents made in response to differences across cases in parental incomes were coherent and consistent. Thus, while our respondents’ initial choice of support amount appeared relatively arbitrary, there was substantial consistency in the adjustments they made to their initial amounts to reflect changing facts, presumably as a result of shared norms. We thus replicated a pattern, found in other domains as well, that Ariely has called “coherent arbitrariness” (Ariely XXX). Furthermore, the consistent pattern by which our respondents’ preferred support amounts changed, in response to changes in either parent’s income, was not the same as either of the two rules employed by nearly all states, but seemed instead to be a blend of them.

The present study continues this inquiry by adding an examination of the abstract
principles our lay judges endorse. In particular, we consider: a) whether there are clear patterns in their views about possible principles to which one might appeal in deciding on the support amount in particular cases; b) whether individual differences in their views about these principles are related to their demographic characteristics; and c) whether individual differences in their views are systematically reflected in their individual judgments of the appropriate support amount in particular cases.

The third inquiry, the interplay between principles and cases, taps into wider questions. Public policy debates sometimes focus on principles more than cases, as when one candidate emphasizes the importance of individual responsibility while his opponent emphasizes the importance of providing help to those in need. On the other hand, successful politicians also appreciate intuitively the power of the representativeness heuristic (Tversky & Kahneman, 1974) when they use dramatic particular cases to persuade voters that they share the voters’ values. Both legislators and judges surely have intuitions about how particular cases should come out, but both (and especially judges) are also called upon to provide principled explanations for the rules they adopt and apply to particular cases. A recurring issue is whether the principles people endorse are in fact consistently reflected in their judgments about particular cases. The questions we ask here begin our exploration of that subject.

A. Legal and Policy Background

When parents separate, their minor children usually reside mostly with one parent, most commonly the mother. The “residential” or “custodial parent” is normally entitled to an order

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1Many studies show that roughly nine of ten of custodial parents are mothers (Fabricius, Braver, Diaz and Schenck, in Press).
requiring the other parent, the “obligor”, to pay her² child support. While enforcement of child support orders were once the exception rather than the rule, in recent decades a broad political consensus has produced legal changes yielding more enforcement success.³ One of those changes was a federal law that required states to move away from the traditional system in which child support amounts were decided case by case by individual judges exercising broad discretion to a system of statewide child support “guidelines”. Although the Federal law imposed no substantive standards on the states, it did specify that these guidelines need to be “based on specific descriptive and numeric criteria” that lead to the computation of a specific monetary child support award in each case.⁴ While the law permits judges to order an amount that deviates from the guideline amount (so long as they write an opinion explaining why using the guideline amount would be “inappropriate or unjust” in the particular case), actual support orders in fact conform to the amount specified in the formulaic guidelines in about 85% or more of support cases (Venohr & Griffith, 2003; Guidubaldi, 2001). Thus child support policy is no longer made by judges deciding individual cases but by those assigned the task of drafting the state’s guidelines, which is often an ad hoc committee that includes some ordinary citizens.

In every state’s guidelines, two key factors determine the basic support amount: the number of children, and the incomes of their parents. (In most states, both parental incomes matter; in some, only the obligor’s. Some use gross income, some net after various kinds of deductions, especially taxes; some use weekly, some monthly income.) The basic support amount is then commonly adjusted, according to the guideline instructions, to take account of

²For simplicity, albeit with some loss of accuracy, we refer to the receiver of child support with feminine pronouns and the payer, nonresidential or noncustodial parent with masculine pronouns.

other facts the state deems relevant, such as the cost of the children’s health insurance, the ages of the children, the cost of child care necessary to allow a parent to work, or (in some states) the allocation of custodial time. There is considerable variability across states: one state’s guidelines may call for twice the support amount specified in the adjoining state’s schedule, in what seems the identical case (Pirog, 2003). But only a portion of this variation among the states is the product of conscious differences in policy choices. (Ellman, 2004). Indeed, it appears that the process states employ to write their guidelines only rarely engages the question of establishing the principles by which to determine their content.

In *The Theory of Child Support* (Ellman & Ellman, 2008), one of us offered a set of principles policymakers could employ in formulating support guidelines, and discussed how guidelines could be devised that would implement the policymaker’s values. *Theory’s* four key policy principles reflect three purposes for requiring support payments, and one limitation on the amount of support that can be required to satisfy those purposes. They are:

1) To protect the financial well-being of the child who is the order’s intended beneficiary (the *Well-Being Principle*). *Theory* argues that this obvious principle is most important in cases of low income custodial parents, for whom additional support dollars are likely to have the greatest marginal impact on child well-being. At the higher incomes, by contrast, additional dollars may add so little to child well-being that this principle ceases to have policy importance, and there may well be some high income level (the *well-being maximum*) above which additional funds have no incremental well-being impact on the child. If protecting child financial well-

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5 *Theory* offers a way to analyze support obligations in the usual case in which the child lives primarily with one parent, and also addresses the complications arising when either parent remarries or has additional children in his or her new household.
being were the only purpose for requiring child support, the law would not require support payments to custodial parents whose income approaches the well-being maximum. But in fact the law typically does so require, which suggests that protecting child well-being is not child support law’s only purpose, even though it is one important purpose.

2) To enforce the social consensus that both parents have an obligation to financially support the child, even if the child lives primarily with only one of them. This *Dual-Obligation Principle* is perhaps the most important reason why we require support payments to be made to custodial parents who earn more than the well-being maximum. While support dollars justified by the Well-Being Principle vindicate an interest of the child’s, support dollars justified by the Dual-Obligation Principle vindicate the custodial parent’s interest in not being unfairly allocated the entire support burden when the other parent is capable of contributing to it. Because the purpose of support dollars justified by the Dual-Obligation Principle is reimbursement of the custodial parent rather than protection of the child’s well-being, presumably the custodial parent can appropriately spend such dollars on any purpose she desires, whether or not it yields benefit to the child.

3) To limit the size of the gap that may otherwise arise between the child’s living standard when residing with the custodial parent, and the potentially higher living standard of the support obligor. *Theory* asserts that this *Gross Disparity Principle*, like the Dual-Obligation Principle, is important primarily when custodial household income approaches the well-being maximum. It provides a second possible reason, in addition to the Dual-Obligation Principle, for requiring payments to these custodial households: the belief that fairness requires providing the child with a living standard not grossly disproportionate to the support obligor’s, even when this
goal would raise the child’s living standard past the point where additional dollars boost child well-being. The lower the dollar amount one chooses for the well-being maximum, the greater is the potential impact of the Gross Disparity Principle, because there will be more cases in which one would need to rely on it to explain a support payment.

The Gross Disparity Principle is distinct, however, from a principle protecting the child from any financial loss at all at divorce, or from a principle requiring that the child and the support obligor have equal living standards. One can satisfy the requirement that the child’s living standard not be grossly disparate from the support obligor’s while falling well short of meeting either of these more ambitious goals. The Gross Disparity Principle was adopted as by the American Law Institute as one guideline for setting the amount of support payments.

There are nonetheless reasons to think that fewer people will agree with the Gross Disparity Principle than the Well-Being or Dual Obligation Principles. One cannot protect the child from a fall in living standard without protecting the custodial parent as well: they share a household and thus a living standard. The Gross Disparity Principle can therefore be seen as giving a windfall to the custodial parent, and one that cannot be justified by the need to ensure basic child well-being. Theory therefore speculates that the Well-Being and Dual-Obligations principles enjoy broader and deeper support than the Gross Disparity Principle. Moreover, Theory endorses this result as normative matter, because it concludes that the Gross Disparity Principle is counterbalanced more easily than either of the first two Principles by the fourth and final policy it identifies that limits the amount of support the law can require of the obligor.

4) The Earner’s Priority Principle is the simple idea that the earner’s needs have priority claims on the earner’s income, and that the law needs a good reason to require one person to
share their income with another. Theory suggests that support payments justified as necessary to ensure the child’s well-being, or to fulfill the earner’s duty to contribute to his children’s support, satisfy this requirement more readily than are payments justified only by the Gross Disparity Principle.

People will of course vary in the relative importance they assign to the four principles; Theory both predicts and endorses the belief that more weight is properly attached to the first two purposes for requiring support than to the Gross Disparity component. For that reason, the counterweight of the Earner’s Priority Principle will limit Gross Disparity claims more often than Well-Being or Dual-Obligation claims. Nonetheless, the Earner’s Priority Principle operates to limit Well-Being and Dual-Obligation claims as well. First, Theory suggests that the strength of the Earner’s Priority Principle is greater the less the earner has, and is great enough in the case of poor obligors to limit their support obligations even when the child’s child well-being suffers in consequence. Second, while Theory addresses in detail how one might calculate the support amount called for by both the Well-Being and Dual-Obligation components, it also notes that Dual-Obligation might be thought at least partially vindicated by token support amounts, and that such symbolic payments may therefore be regarded as appropriate for poor obligors.

One purpose of this investigation was to explore the support each of these abstract principles has among ordinary citizens. One can see that while Theory argues that breaking down the support obligation into these four purposes advances analytic clarity and identifies distinct policy concerns that people in fact consider, the four purposes inevitably interact when any particular support case is considered. This creates a challenge in formulating survey questions that tap into a respondent’s views about one but only one of these four principles. So of course,
this study cannot provide a complete account of our respondents’ attitudes toward the four basic principles of Theory, much less a complete account of all the views they have on every issue that could influence their judgment of the appropriate support amount in particular cases. In order to place respondent attitudes towards the Theory’s principles in a larger context, however, the survey instruments employed in this study also sought respondent views on six additional principles for setting child support amounts that are not among the four identified by Theory. These six additional principles, explained more fully below in the Results section, were chosen because all have been considered or proposed in the child support policy literature.

B. Prior Studies of Lay Judgments about Child Support

There have been a few prior studies of lay views about child support. A telephone survey of Wisconsin residents (Schaeffer, 1990) presented respondents with two vignettes in which the parental incomes were randomly chosen from a set in which nonresidential fathers earned between $500 a month and $5000, while residential mothers’ earnings varied from zero to $1500. The respondents named support amounts that increased with the obligor-father’s income and declined as maternal incomes rose. Thus the respondents’ preferred approach appeared to support the system that the child support literature calls income shares, which most American states follow, and rejected the alternative followed in a minority of states, the Percentage of Obligor Income (POOI), in which support amounts are set as a percentage of obligor income without regard to the income of the custodial parent. Another analysis of the same data set (Corbett, Garfinkel & Schaeffer, 1992) asked respondents to identify the appropriate support amount as a percentage of the father’s income rather than in dollars. The average rate (for a one-

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6A 2005 survey found 13 POOI states; the number may be less now (Venohr & Griffith, 2005).
child family, across all income amounts) was 24.7%, while the average response of those who answered in dollars, when converted to percentages, was 21.4%. Female respondents chose higher support amounts than males did.

Bergmann and Wetchler (1995) conducted a telephone poll of Maryland residents. Respondents were given four vignettes each and were asked "how much money, if any, you think the absent parent should give each week for the support of the child" in each of them. For one group of 162 respondents, the four vignettes were identical but for the father's "take-home pay", which was one of four amounts: $250, $450, $600 or $1,000 per week. (The mother's take-home pay was a constant $250 per week in all four.) For a second group of respondents, one of these vignettes was replaced by one in which the mother had a higher income. The respondents' mean support amounts were somewhat higher than those provided by Maryland's income shares guidelines, but there was considerable dispersion across respondents in the preferred amounts, and a small but statistically significant difference between the mean amounts favored by men and women.

Coleman, Ganong, Killian & McDaniel (1999), mailed survey forms with vignettes to residents of Missouri. The forms fixed the gross income of the custodial, set the noncustodial’s at twice the custodial’s, and asked respondents what they thought the proper child support amount should be. The responses format was mixed: Respondents could choose one of four possible amounts listed on the form (the highest of which was the state guideline amount), or
write in “another amount” if they preferred. They found substantial variability in the responses, and detected no differences by respondent’s gender.\footnote{They also found that their respondents favored child support orders lower than the Missouri guideline amount, but it seems likely that this finding was an artifact of their response format, which effectively anchored the responses at the guideline amount or below. See Braver, MacCoun, and Ellman (2009).}

The Wisconsin, Maryland and Missouri studies asked about cases but did not ask respondents their views about principles. A more recent Australian survey (Smyth and Weston, 2005) took the opposite approach, focusing on principles alone. This telephone survey posed multiple choice and Yes/No questions about support principles. It employed two samples. A sample of the general population between the ages of 18 and 64 was drawn from calls to a random selection of Australian residential landline numbers. A second sample of separated or divorced parents with children under 18 was assembled from respondents reached through random-digit dialing of Australian numbers. Using both samples, the study could compare four groups of respondents: men and women in the general population, and custodial mothers and noncustodial fathers in separated families. (There were too few custodial fathers and noncustodial mothers to yield meaningful data on their views.)

The Australian questions, like those in the earlier surveys, usually assumed a paternal obligor and a maternal residential parent, and the principles endorsed by the Australian respondents were often consistent with the principles one could imply from the support awards favored by the Wisconsin respondents. For example, the Australian respondents said they preferred a child support system that based support amounts on both parents’ incomes, rather than on the obligor’s income alone, which is consistent with the pattern of support amounts actually named by the Wisconsin respondents (because the respondents’ named amounts varied
The Wisconsin study used the Factorial Survey approach, asking respondents 3 vignettes randomly chosen from a factorial set of a total of 600 possibilities. However, the analytic method used by the Wisconsin researchers required them to assume each vignette judgment is independent of the others, and to treat them as if they each arose from different respondents. P.H. Rossi and S.L. Nock, Measuring Social Judgements: The Factorial Survey Approach. (1982).

Schaeffer’s reported standard errors are smaller than she could legitimately claim, because she assumes the judgments come from independent subjects when they do not. Statistical methods, such as Hierarchical Linear Models, not in existence when Schaeffer performed her analysis, now permit more appropriate assumptions to be made.
Using a Hierarchical Linear Model analysis of respondents’ favored amounts, we confirmed the earlier studies’ rejection of POOI guidelines by showing that higher support amounts were consistently favored as custodial parent (CP) income declined. Respondents also favored a rate structure in which the support amount increased more rapidly with noncustodial parent (NCP) income when CP income was lower, a principle about which state guidelines differ. Moreover, even though the dollar support amounts they favored for any given case showed considerable variability from respondent to respondent, we found great consistency across respondents in the rate structure they favored.

Both women, and those with more education, favored somewhat higher support amounts, especially for cases with higher NCP incomes, but we found no relationship between respondents’ favored support amounts and the other demographic variables we considered, including age and income. Since our respondents clearly favored income shares over a POOI system in which CP income does not affect support amounts, we chose to compare our respondents’ preferences to the support amounts specified in Iowa’s guideline, which provide for support amounts in the middle of the range among states with income shares guidelines. The equation fitting our respondents’ judgments returned support amounts that were virtually equal to the Iowa guideline amount for cases in which both parental incomes were in the middle of our range of inquiry, but returned higher support amounts than the Iowa guidelines for cases with low CP incomes, and lower amounts for cases with high CP incomes. Our respondents thus favored a rate structure more responsive to CP income than are typical incomes shares guidelines.

The present analysis is drawn from the same data set, in which, in addition to obtaining dollar judgments for vignettes, we explored respondents’ endorsement of child support principles.
We assessed these endorsements or attitudes on 1 to 7 Likert scales, rather than with the simple “yes/no/it depends” format employed by the Australian study. Our respondents also answered a larger set of attitude questions than did those in the Australian study. Most importantly, because all respondents were presented with both all Likert items and all the items asking for particular support amounts for each vignette, ours is the first investigation to examine the relationship between the entire pattern of respondent dollar judgments for the vignettes (in essence, the respondent’s own guideline table), to the principles the respondent endorses, as well as to other respondent characteristics.
C. Method


The sample was fully described in Ellman, Braver & MacCoun (2009). Briefly, respondents were citizens called to serve on the jury panel in Pima County (Tucson) Arizona and show less self-selection and bias than jury pools in some other jurisdictions. After arriving and signing in at the jury assembly room, our research assistant was introduced by the Commissioner staff and asked if pool members would voluntarily assist the researchers and the court by participating in a “university-based” survey about child support? Approximately 75% of panel members accepted the invitation and completed the survey form they were given, a very high response rate\(^\text{10}\) from an excellent sample.

Of those completing the survey, 55% were women, 62% were married, 35% had been divorced, and 69% had children. Twelve percent said they had at some time been ordered to pay child support (almost all of these were male); 18% had at some time been the person to whom someone else was ordered to pay support (almost exclusively female). The education levels of the respondents were higher than national averages: only about 3% had failed to graduate from high school, 25% had a Bachelors degree, and nearly 16% a graduate or professional degree. The high level of graduate degrees may reflect the location in Pima County of the University of Arizona.

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\(^\text{10}\)The Wisconsin sample consisted of a bit over 1,000 individuals reached through random digit dialing of Wisconsin phone numbers, and it would appear that responses were obtained from about 40% of those targeted. (The not-able-to-connect or noncontact rate was 48.9%, of which 16.4% were continual ring or continual busy; where telephone contact was made, the refusal rate was 22.5%.) See Maurice MacDonald, Objectives, Procedures, and Sampling Results for CHIPPS, Institute for Research on Poverty, University of Wisconsin (mimeo, 1986). The Australian researchers estimated that the 1001 individuals who participated in their first (general population) sample were 36 percent of all the eligible households in the initial group of randomly drawn numbers. The response rate in the second study is complicated to calculate because of the set of steps necessary to cull the targeted demographic group (divorced and separated parents) from the very large set of initial contacts.
Our sample was also wealthier than the national average, with fewer respondents earning less than $15,000 (5.6% vs. 14.6% for the US) and more earning above $60,000 (46% vs. 39% for the US).\textsuperscript{11}

\textbf{B. The Survey Instrument}

The survey instruments employed for this study contained three sections. The final section sought demographic information about our respondents: their gender, whether currently married, whether they have ever been divorced, have children, have ever paid child support, or received it (all dummy coded), age, education (choices were: 1=I quit school before high school graduation; 2=I graduated from high school; 3=I attended some college but never got a college degree; 4=I attended college and received a two-year (Associates) degree; 5=I attended college and received a four-year (Bachelors) degree; 6=I attended college, received a bachelor’s degree, and also attended one year or more of graduate or professional school after college; 7=I have a graduate or professional degree, masters or doctoral), and annual household income (1 = Less than $15,000; 2 = Between $15,000 and $30,000; 3 = Between $30,000 and $60,000; 4 = Between $60,000 and $90,000; 5 = More than $90,000). A second section was comprised primarily of the Likert attitude items. Respondents were instructed to “indicate whether you agree or disagree with each of the following statements by circling a number from 1 (strongly disagree) to 7 (strongly agree).” We provide more detail about the individual Likert items below, in the Results section.

\textsuperscript{11}The national figures here were derived from the data reported in the U.S. Census Bureau, Current Population Survey, 2006 Annual Social and Economic Supplement, Table HINC-01, \textit{Selected Characteristics of Households, by Total Money Income in 2005, available at} <http://pubdb3.census.gov/macro/032006/hhinc/new01_001.htm>.
The third section contained the vignettes – statements describing a particular parental situation, including parental incomes – for which respondents indicated the dollar amount they believed the support order should specify. A companion methodological study (Braver, MacCoun, and Ellman 2008) examined whether our results were importantly affected by whether we asked respondents to indicate the support amount they favored by naming a number; naming a number after having their response anchored by the suggestion that some courts ordered some particular amount, even though other courts did not always agree; choosing a number from a range of 18 possible values we supplied (including “zero” and “more than $3,500); and rating on a scale (from much too low to much too high) various potential support amounts we supplied. We found no differences between the Name and Choose variants that would affect our analysis, so we combined the results from both method (N=262) for the vignette questions examined in this paper. Orders were counterbalanced; some subjects began with questions about higher income parents and worked toward lower incomes, while an equal number were presented with the vignettes in the opposite sequence.

For both vignettes and Likert items, respondents were told to assume that one child, a 9 year-old boy, lives mostly with Mom, but Dad sees him often, and the child frequently stays with Dad overnight. The vignette section further explained:

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12 Anchoring produced the expected result in that the mean and median responses shifted toward the value of the anchor. The rate method yielded a more complicated pattern.
We want to know the amount of child support, if any, that you think Dad should be required to pay Mom every month all things considered. What will change from story to story is how much Mom earns, and how much Dad earns. There is no right or wrong answer; just tell us what you think is right. Try to imagine yourself as the judge in each of the following cases. Picture yourself sitting on the bench in a courtroom needing to decide about what should be done about ordering child support in the case and trying to decide correctly. To do so, you might try putting yourself in the shoes of Mom or of Dad or both, or imagine a loved one in that position.”

The vignettes contained information about parental incomes that varied with the vignette:

the father’s (obligor’s) take-home pay was either two, four, or six thousand dollars per month, and the mother’s (obligee’s) take-home pay was either one, three, or five thousand per month. There were thus nine possible income combinations, and every respondent was asked to make a judgment about all nine.

C. Results

1. Likert Item Analysis

Table 1 provides the text of the Likert items considered in this paper, and a summary of our respondents’ answers on the scale of 1(strongly disagree) to 7 (strongly agree). The first two columns of Table 2 show the percent of respondents who answered 6 or 7 (labeled as “clearly agree”) and the percent who chose 1 or 2 (“clearly disagree”). The mean and standard deviation of all responses to each items are also reported here.

Table 1 groups the items thematically by the principle we initially expected the item to test. (The forms themselves separated thematically similar items to improve the validity of the repeated measure.) The first four groups were expected to measure respondents’ endorsement of the four principles advanced in Theory and described above: Well-Being; Gross Disparity; Dual Obligation, and Earner’s Priority. Theory does not assert that everyone would equally endorse all four principles. It does make the normative claim that these are the appropriate principles to
apply, and the empirical claim that the strength of a person’s commitment to them, relative to one another, will predict the level of child support that person believes correct in particular cases.

The remaining six groups of items were intended to measure respondents’ support for other principles not urged by Theory but which have been considered in the child support literature. One set of questions asks about POOI, which, as noted earlier, some states currently employ. “No compelled support” and “decent minimum only” are shorthand terms describing two related views that are sometimes urged by obligor groups that believe either that the law’s coercive power should not be employed to collect support at all, or, more often, should not be employed to collect more than some decent minimum sufficient to ensure the child is not in poverty. At the other end of the spectrum, “ensure no financial loss from divorce” and “ensure marital living standard” are two principles very protective of the child’s financial interests but which give little weight to the financial interests of the obligor. There is in fact no substantive difference between these two principles, because to ensure the child suffers no financial loss from divorce requires a support amount that keeps the child at the marital living standard.

Courts sometimes mistakenly suggest that the existing guidelines are designed to implement the “no loss” or “marital living standard” principle.\(^{13}\) A moment’s reflection reveals, however, that to ensure that the child and custodial parent retain the marital living standard will normally require a support amount that would bring the support obligor well below it, because there are rarely sufficient funds after divorce to maintain both households at the living standard the single intact household enjoyed before the separation. No state, however, has adopted guidelines that require this result. Many people may nonetheless feel that insulating the child from any decline in

\(^{13}\) E.g., see Voishan v. Palma, 609 A.2d 319, 322 (Md. 1992) ("The conceptual underpinning [of Maryland's Income Shares child support guidelines] is that a child should...enjoy the standard of living he or she would have experienced had the child's parents remained together.")
living standard is an appropriate aspiration even if its realization is beyond doing in most cases. The heuristics and bias literature suggests that the principle would receive more support when stated in loss-avoidance language (“no financial loss from divorce”) as compared to language that is more loss-neutral (“ensure marital living standard”), a prediction we test by posing both formulations of the principle. Finally, “ensure equal living standard” is a principle urged in some feminist literature. It is not the same as ensuring the marital living standard, as a support amount ensuring the custodial and noncustodial households the same living standard would often require a decline from the marital standard in both households, although an equal decline.

There are twenty Likert items that were meant to probe respondent attitudes toward these ten possible principles (four from Theory and six others). There are several reasons to have multiple items for most principles. Multiple items allow the construction of composite scales which have greater reliability and less idiosyncratic error than any single item. Second, in seven cases multiple items were employed to allow inclusion of an item stating the negative of the principle. The negative versions are marked with a dagger (‡). Someone who agrees with the principle should disagree with its negative version. If respondents to Likert instruments exhibit a bias toward agreement, taking a repeated measure in the negative form is one way of controlling for that. Negative formulations present their own complications, however. People may be more accustomed to being asked whether they agree with a statement, than whether they disagree with it, and true negative statements of a principle can be difficult to formulate and awkward in construction. For these reasons it is hardly clear that disagreement with the negative version is a better measure of support for the principle than is agreement with the positive version, but it is an additional measure.
The twenty items also include two meant to get at a substantive concern that arises from the fact that the child and the custodial parent necessarily share a living standard. That fact means that both the Equal Living Standard principle, and the No Loss from Divorce principle, necessarily protect the custodial parent as well as the child. A Likert item probing a respondent’s attitude toward either principle can be phrased to focus attention on this point, or not. One might expect the phrasing to affect the level of reported agreement. We tested for this possibility by offering companion formulations of these two principles. In each case, one item mentions the residential parent and one does not.

Overall, one can draw the following observations from the results presented in Table One.

a. Support for Theory’s principles. The Well-Being and Dual-Obligation Principles received the most support of any principle presented to the respondents. The virtually unanimous support for the Well-Being Principle is not surprising, but it may also seem unimportant because even unanimous support for the principle would not necessarily produce agreement on the appropriate support amount in specific cases. Respondents will still differ about the amount of money required to guarantee child well-being, as well as the relative weight to give other factors, such as the Earner’s Priority Principle, that are in tension with it. It nonetheless seems important to know that more than 90% of the respondents clearly agree that the child’s well-being is the most important reason to require child support payments, because the dominant economic methodology nearly all states today employ to generate their support guidelines never considers child well-being it all.

Seventy percent of the respondents clearly agreed with two of the three items measuring support for the Dual-Obligation Principle, the next highest level of endorsement after the Well-
Being Principle, and almost 60% clearly agree with the third item. The only item showing similar levels of agreement was the third of the three items measuring support for the Earner’s Priority Principle. Of the three Earner’s Priority Principle item, this one offered the purest measure of support for the Principle because it is stated in the positive and focuses exclusively on the earner’s claim without reference to the child’s situation. Moreover, it focuses on whether the father should be able to ensure his own minimal support, while the second of the three items states the principle in a way that could as easily apply to a middle class or upper class father.

Theory suggests that the Earner’s Priority Principle is strongest when the earner has the least, and that view is reflected in the respondents’ relative ratings of the second and third Earner’s Priority Principle statements.

The first of the Earner’s Priority Principle items showed the least support for the principle, with approximately equal numbers clearly agreeing and disagreeing. The explanation may lie in the item’s phrasing: the respondent is asked whether poverty should excuse the obligor entirely from any support obligation. The item thus requires respondents to weigh the Earner’s Priority Principle against the Dual Obligation Principle, such that differences in respondents’ answers may reflect the relative weight they give to one principle as opposed to the other. One respondent may believe that while the Earner’s Priority Principle is very important, the Dual Obligation Principle still requires some support contribution by the obligor, while another respondent may have the same view of the Earner’s Priority Principle but accord less weight to Dual Obligation. The third Earner’s Priority Principle item, by contrast, can be read as asking whether the Earner’s Priority Principle justifies reducing, not eliminating, the father’s support payments. That proposition that could be endorsed by a respondent who gives considerable weight to both
principles. Unlike the first Earner’s Priority Principle item, it receive very strong support—indeed, stronger than any statement other than the one on child well-being. *Theory* argues that the Earner’s Priority Principle should shield a poor father from onerous support obligations, but that it is still appropriate to impose a nominal obligation on him, both to vindicate the Dual Obligation principle and to acknowledge his social paternity. The pattern of responses here suggests that the respondents would likely agree.

Gross Disparity receives the least support of *Theory*’s four principles—just as *Theory* itself predicts. Nonetheless, nearly 60% clearly support it in the positive version, as do a plurality in the negative version. One might have expected most respondents to *endorse* the view expressed in the negative version, that a father fulfills his financial obligations by making the child “completely comfortable”, even if he lives much better than the child. But the results were to the contrary, and thus consistent with the Gross Disparity principle. Nonetheless, while the Gross Disparity principle receives support, it does not receive much more support than an item testing another principle that is not part of *Theory* (the first of the No Loss from Divorce items).

*b. Support for other principles.* Proposals that child support should be voluntary rather than compelled, or that compelled support should be limited to ensuring the child a decent minimum living standard, were both rejected by respondents. They believed courts should order support, and in higher amounts than necessary to provide a decent minimum. Our respondents also rejected POOI, although by more narrow margins than in the Australian study. On the other hand, there was considerable support for protecting the child from any financial loss at divorce. As expected, however, the same respondents gave that principle less support when the benefit to the mother was made more salient by rephrasing the question to ask about protecting “the mother
and child” from financial loss, rather than “the child”. They also gave the principle less support when it was recast as a guarantee of the marital living standard, rather than as a “loss”, confirming the prediction we suggest would follow from the loss-aversion literature. (Both declines were significant, p<.001.)

The pattern for the Equal Living Standard principle was more mixed. There was fair degree of support for first of the three items, which was the most straightforward statement of the principle. Support again declined significantly, p<.001, when rephrasing of the statement made the principle’s favorable impact on the mother more salient. Finally, a plurality of respondents agreed with the negatively phrased item, a result consistent with rejection of the Equal Living Standards principle.

c. Gender differences. The last column of Table One gives the difference between the mean responses of men and women for each item. These differences in means were significant at the .001 level for all but three items. Gender differences were thus pervasive. The three exceptions included the two statements endorsed by the great majority of all respondents, the item stating the Well-Being Principle, and third item stating the Earner’s Priority Principle. A second Earner’s Priority Principle item that also enjoyed fairly strong support did not yield a significant gender difference at the .05 level, but it came close (.09 with equal variances assumed; .11 if not).

The gender differences in mean response for all the other items were not only significant but often also large. The differences conformed to stereotype: women were more favorably inclined than men toward statements consistent with larger required support payments, and less favorably inclined toward statements consistent with smaller payments. On the seven point Likert scale, the mean score for women was nearly a full point more favorable than for men toward Equal Living
Standards and Ensuring No Financial Loss At Divorce, and much less favorable than men to the proposition that fathers needn’t pay support at all when the mother has enough money of her own to support the child fully. Particularly large gender differences were found in statements measuring support for POOI: women were much more favorably inclined toward it than men. This could be an artifact of the way the questions were presented: should fathers pay less when maternal incomes rise, or not? Women were much more likely than men to think not. An equally valid test might come from the other direction: should fathers pay more when maternal incomes decline? Perhaps men’s responses would come closer to women’s with such a phrasing. On the other hand, the pervasive nature of the gender differences suggests they are not an artifact of item construction.

The differences between the responses of men and women are certainly not surprising. A distinction has been drawn between neutral areas of law and non-neutral areas. In neutral areas, people do not necessarily imagine themselves as likely being on one side or the other of potential disputes that might arise. In thinking abstractly about alternative rules of contract law, for example, people probably have little reasons to assume that they will find themselves in the position of the person seeking to enforce a claimed agreement, as opposed to the person defending against such an enforcement claim. In family law, by contrast, men and women are likely to imagine themselves in different positions with respect to the law’s possible application to them. In fact, twelve percent of the respondents in our study said at some point there had been a court order requiring them to pay child support, and 18% said that at some point there had been a court order requiring someone to pay support to them. Nearly all the support obligors were men.

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and nearly all the obligees were women. We tested to see whether differences between men and women remained if we looked only at those who reported no personal experience with child support orders, as obligors or obligees. In no case did a significant gender difference become insignificant when those with experience in the child support legal system were removed from the sample, but the difference in means did decline for some items, sometimes by as much as 1/3. One plausible understanding of these gender differences, then, is that experience in the child support system is sufficiently common, and sufficiently gender-dependent, that even men and women who have not themselves had this experience are likely to see the issues through the eyes of obligor or obligee.

2. Exploratory Factor Analysis.

Did respondents’ views on the various Likert items in fact organize themselves along the thematic lines assumed in Table One? We originally expected to answer this question by doing a Confirmatory Factor Analysis. A preliminary correlation analysis made clear, however, that responses to the items often did not correlate in this way, and sometimes instead had high correlations with items intended to capture other factors. We therefore abandoned the CFA approach and conducted an Exploratory Factor Analysis instead. Such an analysis examines the associations between agreement tendencies for each item to reveal patterns. The fundamental notion, due to Thurstone15, is that the interrelations among the measures observed may be represented by a smaller number of common factors16.

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We submitted the 20 Likert items in Table One to the EFA.\textsuperscript{17} The analysis proceeded by the standard method of Principal Components Analysis, using the Varimax rotation technique with Kaiser normalization. Results showed that a good reproduction of the data arises from a four-factor solution, accounting together for 52\% of the variance of the items. Scree plots showed little addition systematic variation was interpretable.

Results from an EFA are most interpretably reported by presenting the Rotated Component Matrix, with items comprising the interpreted factors highlighted. This analysis (N=863) is presented in Table Two (loadings less than ±.15 are eliminated for readability).\textsuperscript{18} To aid in relating Table One to Table Two, a mnemonic code appears with each item showing its thematic classification in Table 2, as follows: WB (child Well Being); GD (Gross Disparity); DO (Dual Obligation); EPP (Earner's Priority Principle); NS (No compelled Support); DM (Decent Minimum only); POOI; NL (ensure No financial Loss from divorce–also codes the substantively equivalent “ensure marital living standard”); EQ (ensure EQual Living Standard). Items presenting a negative statement about the principle are coded with a minus sign (e.g., -EPP).

Factor 1 is comprised of 7 items with high positive loadings. Three were originally classified in Table 2 as No Loss, and two as Equal Living Standards. These five items all propose support principles that are very generous toward the residential household, more generous than either

\textsuperscript{17} The survey also contained three other Likert items that did not relate explicitly to child support amounts or principles; these are not listed in Table One or included in the EFA. The omitted Likerts were: a) “The father should be allowed to reduce the child support payments he pays the mother if she remarries and her new husband makes much more money than the father makes.” b) “It would be good idea for the father to pay directly into a special account that could only be used for the child's expenses, rather than for him to pay the mother.” c) “Do you believe money can improve a child’s development, well-being, and happiness by allowing the child better educational opportunities, a better neighborhood in which to grow up, better medical care, or other opportunities to learn or grow or get to know people who will help him? ____ yes ____ no”.

\textsuperscript{18} For this analysis we included respondents who answered surveys that employed the “anchor”and “rate” form of the scenario question, as well as the “name” and “choose” forms, since the Likert portion of survey form was identical. CHECK THIS AND CONFIRM N’S FOR TABLE ONE AND FOR LATER ANALYSES
Theory, or current law in most states (as it is usually understood to operate, although there is some contention on the matter). The remaining two items are Gross Disparity and the negative of Decent Minimum Only, which seem quite consistent with this orientation. We call this factor “Gross Disparity Plus”–a pattern of agreement with these items seems to indicate belief in something more than even the Gross Disparity principle. (Since No Loss and Equal Living Standard do not produce the same results, precisely how much more is left undefined.) The average agreement with the items on this factor was 4.99 (on the seven point Likert scale). The high level of support for Factor 1 seems consistent with our previously reported finding that our respondents favored child support amounts that were higher than most current state guidelines for cases in which custodial parent incomes are low. (Ellman, Braver, and McCoun 2009). On the other hand, the mean support amounts our respondents favored would not in fact ensure the marital living standard to the custodial household, which is also not surprising given the other principles which also must be weighed in the balance. The support of Factor 1 may thus to some extent reflect the policy aspirations of respondents who understand those aspirations are often impossible to realize because they must be balanced against other principles in which they also believe, such as the Earner’s Priority Principle.

Factor 2 is comprised of 6 items, all with comparable loadings near .6. All three of the items originally classified in Table One as Dual Obligation are among these six; the negative DO item has an equivalent negative loading. The other three items that load on this factor also emphasize the father’s obligation to share the financial burden of the child, and we therefore continue to call this the Dual Obligation factor. One of these other three is a negative of the Earner’s Priority Principle, which loads positively on this factor, reflecting a belief that even fathers in poverty
should have to pay some support. The remaining two items in this factor were POOI items, with the negative POOI item carrying an equivalent negative loading. Both ask whether the father’s obligation should decline when the mother’s income rises, a proposition these respondents tend to reject, perhaps reflecting the belief that the father should not be excused from any part of his obligation just because of the mother’s relative prosperity. Average agreement with Factor 2 is 4.82. While EFA requires that items loading on a factor have higher correlations with one another than with items loading on other factors, it does not require zero correlations between items on distinct factors. Table 4 shows that in fact, Factor 1 correlates reasonably highly (.36) with Factor 2 (prior to rotation), implying that people who believe in generous support awards also believe in dual obligation. This is entirely plausible, since the factors do not conflict, even though they do tap distinct sets of beliefs.

The three items that comprise Factor 3 are Decent Minimum Only, No Required Support, and a negative of the Gross Disparity principle, which loads positively on this factor. Their common thread is a limit on the father’s obligations, whether by requiring him to meet just the child’s “basic needs”, or just enough to make the child “completely comfortable” even when the father has the income to do much more, or by not requiring child support at all. We therefore label it “Limiting Father’s Responsibility”. Not surprisingly, Factor 3 correlates negatively with Factor 1 (-.37) and Factor 2 (-.33). Overall agreement with Factor 3 is far lower, averaging 2.81 (4 is midpoint, so 2.81 represents disagreement, on average).

Finally, Factor 4 comprises 3 items. Two of the three are the positive Earner’s Priority Principle items (recall that the negative Earner’s Priority Principle item loaded positively on Factor 2), which suggests that this be called the Earner’s Priority Factor. Included with the two
Earner’s Priority Principle items is the single Well-Being item—the item that, as noted before, elicited more agreement than any other Likert item. The connection between it and the two Earner’s Priority Principle items is not obvious, although Theory does suggest that protection of the child’s well-being is the most persuasive reason to override the earner’s priority and require him to share his earnings. Average agreement with this factor is the highest of all factors (5.69), and the factor is largely uncorrelated with the others, except for a slight negative association with Factor 2.

Table 3 presents the correlations of each of these factors to one another, and to various demographic variables. Rather than weighting by the factor loadings we followed the common alternative of averaging—unit-weighting—the items comprising each factor, after reverse coding any with negative loadings. Some demographics were not significant: respondent Likert answers were not related to whether they were currently married, ever divorced, or had children. Moreover, education level was related (negatively) to the third factor (Limiting Father’s Responsibility) only. Income and age were also negatively related to this factor. Agreement with the first factor (Gross Disparity Plus) was negatively associated with respondents’ income but positively associated with respondent age. All these associations were quite small, but were significant because of the large N.

Gender—the only remaining demographic variable—had, by contrast, comparatively large associations. However, interpretations of gender differences are not straightforward, because gender is typically confounded with the respondent’s own experience with the child support system: almost invariably, payers are men and receivers are women. Accordingly, we break out the findings by a combination category: females who have received child support; females who have never received child support; males who have never paid child support; and males who have
paid child support\textsuperscript{19}. The results for Factors 1 and 2 are so similar they may be shown on the same graph, Figure 1 (the differences between any two points on each line are significant by Tukey test). Factor 3, Limiting Father’s Responsibility, had a reverse pattern, as shown in Figure 2. Tukey tests showed that the two female categories were each different from the two male categories, but the differences within males and within females were not significant. Finally, Factor 4 is shown in Figure 3. Tukey tests showed that the only significant difference was that between the two most extreme groups: male payers vs female receivers.

Figure One shows that men who have paid child support do not share the enthusiasm of women for Dual Obligation and Gross Disparity Plus, as they are neutral, on average, with respect to both principles. On average, men who have not paid support show mild agreement, women who have not received support agree, and women who have received support agree the most strongly of all.

Figure Two shows that all four groups reject Factor Two, Limiting the Father’s Responsibility, but that women reject it more strongly than men. Figure Three shows that all four groups support the Earner’s Priority Principle, including even women who had received support.

\textsuperscript{19} This procedure discarded the 34 respondents (4\%) whose status as support obligor or obligee was gender-atypical, or who had experience as both support obligor and support obligee.
3. Relating Respondent Attitudes to Resolution of Individual Cases

Do respondents’ views about general statements of principle about child support vary systematically with the support amounts they believe appropriate in particular cases? We explore this question by examining the relationship between our respondents’ answers to the vignette and Likert portions of the survey. Recall that the vignette portion asked respondents to consider a series of 9 hypothetical stories. Each respondent was asked to provide the support amount he or she believed appropriate in all nine of the income combinations generated by assigning the father a take-home pay of either two, four, or six thousand dollars per month, and the mother a take-home pay of either one, three, or five thousand dollars per month. Here is sample language describing this additional income information for one of the nine cases given every respondent:

Mom's monthly take-home pay is $5,000 a month, and Dad's is $6,000. How much should Dad be required to pay Mom every month for child support, all things considered?"

We reported fully on the vignette results in our earlier paper (Ellman, Braver & MacCoun, 2009). We present again the basic findings reported there in Figure 4, to lay the groundwork for relating them to the Likert factors. As can be seen by the upward slope of the lines, respondents thought that as NCP’s income increases, the amount of child support should increase significantly, a principle indeed represented in all current state guidelines. The fact that three different lines are required for the three different CP incomes—that the three lines are not on top of one another—illustrates that our respondents reject POOI guidelines, because they believe the CP’s income matters in setting support amounts. They believe that as CP’s income increases, the amount of child support should decline, for any given level of NCP income. Finally, not only are
the three lines not congruent, they also are not parallel. They fan out as NCP income increases. This illustrates the significant interaction between the two parents’ incomes. Our respondents believe that the lower the income of the CP, the more rapidly the support amount should increase with NCP income. Our respondents strongly concurred with this principle, about which state guidelines differ.

Our analytic approach for the vignette data uses hierarchical linear models (HLM), also known as multi-level models, mixed models, or random coefficient models, appropriate when variations are both within and between subjects. Thus, each subject has a series of child support judgments (these vary within subjects), but only one attitude on Likert factor 2 (instead, these vary between subjects). To analyze such data, the HLM approach requires formulations of a regression model both at “Level 1”, within each subject, and at “Level 2”, between subjects. Our fundamental Level 1 model, using standard HLM notation, is below:

\[
CSAmount_i = b_0 + b_1 CPIncome_j + b_2 NCPIncome_j + e_{ij} \quad (1)
\]

To translate, we want to predict the Child Support Amount (CSAmount) subject \(i\) will produce for the \(j^{th}\) vignette. Our Level 1 model specifies that this is a function of a constant, \(b_0\), plus an amount based on the CPIIncome we provide for that \(j^{th}\) vignette, plus another amount due to the NCPIncome of the \(j^{th}\) vignette, plus a random error term \(e_{ij}\). Recall that CPIIncome is either 1000, 3000 or 5000, while NCPIncome is 2000, 4000 or 6000. Each \(b\) coefficient in (1) tells us how much, on average over all judgments by all respondents, the Child Support judgment amount increases or decreases. The HLM analysis of the above Level 1 model found \(b_0 = 321\), \(b_1 = -104\) (meaning that for every $1,000 increase in CPIIncome, child support awards drop $104 on average).
and \( b_2 = 185 \). This implies, for example, that for the vignette in which CPI\text{Income} is $3,000 and NCP\text{Income} is $4,000, the average child support judgment over all respondents was \( 321 + (3 \times -104) + (4 \times 185) = 749 \).

A slightly more complex model did not assume that the CS\text{Amount} judgments were 3 straight-line functions of CPI\text{Income} and NCP\text{Income} that are equally-spaced or -sloped, as assumed above. This more complex model inserted an interaction term, CPI\text{Income} BY NCP\text{Income} (abbreviated as CP\text{xNCP}). (We merely multiply the two amounts, so, e.g., \( 3000 \times 6000 = 18,000,000 \).) In other words, the Level 1 Model becomes

\[
CS\text{Amount} = b_0 + b_1\text{CPI}\text{Income} + b_2\text{NCP}\text{Income} + b_3\text{CP}\times\text{NCP} + \epsilon, \quad (2)
\]

The vignette findings presented in Table 5 and Figure 4 are average results, averaged over all respondents, without regard to what their Likert responses were. We can take into account individual differences in these vignette judgments by incorporating HLM’s Level 2 equations. This approach allows us to see whether there is a systematic relationship between variations in respondent answers to the Likert factors and variations in the support amount they name in response to the vignette questions. First, we allow, by adding a set of \( i \) subscripts, that each respondent might have their own individual child support equation, and that the 4 \( b \) coefficients for respondent \( i \) in (2) might not be the same as those of respondent \( i’ \). For the Level 1 equation (2), the equation becomes:

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20. Whether the functions are straight lines vs have “bends” was tested by other analyses not shown. These analyses found that straight line functions indeed described the judgments well.
Then we formulate four Level 2 equations, each saying that one of the above 4 coefficients in the Level 2 equation specifying the following four predictors for the \( b_0 \) (intercept) coefficient for respondent \( i \):

\[
b_{ij} = u_{ij} + u_{ij} \text{Likfact1}_i + u_{ij} \text{Likfact2}_i + u_{ij} \text{Likfact3}_i + u_{ij} \text{Likfact4}_i + e_{ij}
\]  

(4)

We create analogous Level 2 equations for each of the remaining 3 \( b \) coefficients (i.e., \( b_{1i} \), \( b_{2i} \), and \( b_{3i} \)). Then we substitute the right side of these equations for each of the \( b \) coefficients in equation (3) to get one large “combined” equation. Then we formulate four Level 2 equations, each saying that one of the above 4 coefficients in (3) for a certain respondent is itself predictable from specified characteristics of that respondent. Specifically, to examine whether the four Likert factors relate to these coefficients, we set up a Level 2 equation specifying the following four predictors for the \( b_0 \) (intercept) coefficient for respondent \( i \):

\[
CSAmount_i = b_{0i} + b_{1i} \text{Income}_i + b_{2i} \text{NCPIncome}_i + b_{3i} \text{CPxNCP}_i + \epsilon_{ij}
\]  

(3)

Analysis of this equation revealed several non-significant terms that could be eliminated; doing so led to a reduced equation. Table 4 presents the coefficients that remained when all that were non-significant were eliminated (the intercept was retained though non-significant in order to estimate values in the correct scale.)

Table 4 implies that Likert Factors 1, 2 and 3 (Gross Disparity Plus, Dual Obligation, and Limiting Father’s Responsibility, respectively) all make independent unique significant contributions to the child support judgments respondents render, but Likert Factor 4 (Earner’s

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21. We decided not to create interactions (or product terms) between the four Likert factors for simplicity and economy.

22. The following analyses were based on the 260 respondents in the Name and Choose conditions who provided full data (i.e., no missing data) on both the Likerts and the scenario judgments. This subset of respondents yields average values that are slightly different than those reported in Ellman, Braver & MacCoun (2009).
Priority Principle) does not. Gross Disparity Plus interacts with or moderates all three coefficients (NCPIncome, CPIncome and their interaction); Dual Obligation moderates the CPIncome main effect and the interaction, but not the NCPIncome effect; while Limiting Father’s Responsibility moderates the NCPIncome effect and the interaction, but not the CPIncome effect. These findings make for three distinct patterns of vignette judgments described more fully below.

To elucidate these patterns further, Table 6 and Figure 5 present the first of these patterns: the average child support judgments, as estimated or computed from the coefficients of Table 4, for someone either high or low in terms of their endorsement of Likert Factor 1 (Gross Disparity Plus) but average on Likert Factors 2 and 3.23

One can see that the basic patterns revealed in Figure 4 hold for respondents both high and low in terms of their endorsement of Gross Disparity Plus. That is, plotting both the responses of those with high levels of agreement with Gross Disparity Plus (unshaded values), and the responses of those with low levels of agreement (shaded values), would yield 1) three distinct lines at different heights with 2) an upward slope, and 3) some fanning out. One can also see that those who more fully endorsed reducing Gross Disparity between the CP and NCP households awarded generally higher child support.

But in addition, there was a significant interaction between Gross Disparity Plus and CP income with a negative coefficient. What this implies is that the child support amounts decrease more slowly as CP Income rises for those high on Gross Disparity Plus than for those relatively low. For example, the three judgments made for the $6,000 NCP income situation: those high on

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23. These values were solved for by inserting into the final equation implied by Table xx the mean values over all respondents for Dual Obligation and Limiting Father’s Responsibility, while for Gross Disparity Plus we inserted the mean value (M=4.92) plus the standard deviation (SD=1.33) for high respondents (=6.25), and, for low respondents, the mean value minus the standard deviation (=3.59).
Gross Disparity Plus on average thought that child support awards $1,704, $1,283, and $863 were proper for CP incomes of $1,000, $3,000 and $5,000 respectively, a reduction of about $421 per each $2,000 of additional CP Income. Those low on Gross Disparity Plus thought these respective values should be only $1,172, $928, and $683, a reduction of only about $244 per each $2,000 of additional CP Income, a significantly smaller reduction.

There was also a significant interaction between Gross Disparity Plus and NCP income with a positive coefficient\textsuperscript{24}. What this implies is that, simultaneously, the child support awards increased substantially more as NCP Income rises for those high on Gross Disparity Plus than for those relatively low. Consider the $1,000 CP income situation, for example. The three judgments made by those high on Gross Disparity Plus were, on average, $539, $1,121, and $1,704 for NCP’s incomes of $2,000, $4,000 and $6,000, respectively, increasing $582 for each additional $2,000 of NCP take-home income. Those low on Gross Disparity Plus, however, thought these respective values should be only $389, $780, and $1,172, increasing significantly less, only $391 for each additional $2,000 of NCP take-home income. These are exactly the patterns one would hypothesize if belief in Gross Disparity Plus were impacting vignette judgments in coherent ways.

Next, presented in Table 7 and Figure 67 are the average child support judgments, as estimated from the coefficients of Table 4, for someone either high or low in terms of their endorsement of Likert Factor 2 (Dual Obligation), while average on Likert Factors 1 and 3. Note that the child support amounts provided by those High on endorsement of Dual Obligation are, for the most part, very similar provided by those who are Low. But they differ by more than nominal amounts in two of the three the low NCP income scenarios. People who strongly endorsed Dual

\textsuperscript{24}. There was also a significant negative coefficient for the 3-way interaction, but it was small (-3.0), and not interpreted further here for simplicity sake.
Obligation should want to ensure that NCPs contribute their share, even when the CP has enough income (e.g., the 3,000 and 5,000 CP income scenarios) that it isn’t absolutely necessary for child well-being, and even when for the NCP to do so is a struggle because of the own low income. These are precisely the scenarios in which the two endorsement patterns yield the large differences in child support awards ($457 vs $358 and $434 vs $268, for the $2,000/$3,000 and $2,000/$5,000 scenarios, respectively.)

Finally, presented in Table 8 and Figure 7 are the average child support judgments, as estimated from the coefficients of Table 4, for someone either high or low in terms of their endorsement of Likert Factor 3 (Limiting Father’s Responsibility), while average on Likert Factors 1 and 3. Table 8 discloses that those who are high on Limiting Father’s Responsibility generally give lower child support awards than those low, as might be expected. Furthermore, the extent of the reduction increases as NCPIncome increases (as is implied by the -$22.08 coefficient in Table 4), with the greatest reducing effect ($328) occurring in the income vignette yielding the highest awards: high income ($6,000) NCP, low income ($1,000) CP ($1,602-$1,274).

Clearly, then, the Likert responses were related in powerful and sensible ways to the child support guidelines the respondents would specify.
Discussion and Conclusions

Our earlier paper (Ellman, Braver & MacCoun, 2009) examined how ordinary citizens made child support judgments that allocated a finite resource (money) among the competing parties, implicitly making the necessary tradeoffs among them. We found their judgments showed surprising consistency and coherence. In this paper, we extended the inquiry by assessing how consistent the same citizens were in their ratings of each of 20 abstract principles that could be offered to guide decisions about these tradeoffs. We asked whether their attitudes toward each of these principles cohere into some smaller set of factors that reflect larger themes and whether their ratings of these factors were consistently reflected in their judgments about particular cases.

We found considerable support among our respondents for the principles offered in Theory of Child Support. Statements reflecting the Well-Being and Dual Obligation principles were rated more favorably than statements reflecting any other principles respondents were asked about. The Earner’s Priority principle received equally strong support as applied to low-income obligors, the context in which Theory suggests it is most applicable. The Gross Disparity principle was also favored, on balance. Our respondents’ support for it was not quite as strong as for the first three principles, which Theory also predicted, but was still stronger than other principles about which we inquired. Close behind, however, was the principle that the child should suffer no financial loss from divorce, with a mean rating nearly as favorable as the Gross Disparity principle. Support for this principle was sensitive to framing, however, in just the way that one might predict from the heuristic and bias literature: it received significantly less support when reframed in non-loss terms,
and when recast to make its favorable impact on the custodial mother more salient. Principles suggesting limits on legally imposed child support obligations, apart from the application of the Earner’s Priority principle to poor obligors, received noticeably less support. Variability in the Likert ratings across respondents was relatively large, with pervasive gender differences. We speculated that the gender differences likely arise because family law is a “non-neutral” area (Eisenberg, 1983): since the great majority of support obligors are men, and support recipients are women, men and women are likely to imagine themselves in different positions with respect to the law’s possible application to them.

The Exploratory Factor Analysis of all 20 Likert items revealed that 19 of them could be grouped into four factors that together accounted for more than half the item variance. Three of the four factors approximated Theory’s principles, and can be called Gross Disparity Plus, Dual Obligation, and Earner’s Priority. The fourth factor, Limiting Father’s Responsibility, included all the principles (other than Earner’s Priority) that supported smaller awards, and was the only factor for which the respondents’ mean item rating indicated disagreement. By contrast, the Earner’s Priority factor had the highest mean item rating. The large difference in mean rating between these two factors indicates that the respondents clearly distinguished principles that protected obligors from excessive orders, which they on average supported, from principles that favored low support awards more generally, which they on average did not support. In combination with the favorable average rating for the items comprising the Gross Disparity Plus factor, the overall pattern suggests that respondents are particularly sensitive to low earners, whether obligor or obligee. This suggestion is in fact consistent with the patterns of support amounts favored by our respondents as reported in our earlier paper (Ellman, Braver and MaCoun 2009). In that paper we observed that
in comparison with typical state income share guidelines, our respondents favored higher support amounts in cases with low custodial parent income, but lower support amounts in cases with higher custodial parent income, especially when obligor income was not high.

The Exploratory Factor Analysis showed the greatest differences in responses to the Likert factors between men who have paid support and women who have received it. Individual factor ratings correlated with one another in reasonable ways and, apart from gender, the relationships of factor ratings with demographic characteristics were relatively small and inconsistent.

Allocating items to factors also allowed us to make a more systematic inquiry into the relationship between our respondents’ Likert ratings and the support amounts they favored in the vignettes. We found that three of the four Likert factors make independent and significant contributions in predicting a respondent’s favored support amounts: Gross Disparity Plus, Dual Obligation, and Limiting Father’s Responsibility. That these three factors each account for significant variance in one respect or another even when entered simultaneously, and that the patterns they yield are distinct, attests to the power of these abstract principles in explaining how our respondents—lay judges, in effect—decided individual cases. The fourth factor, Earner’s Priority Principle, did not make an independent contribution to respondents’ child support judgments. This was the final factor revealed by the Exploratory Factor Analysis, and thus had the lowest loadings and percent of variance accounted for. It consisted of only three items. One of those items, the Well-Being principle, could not provide much power in distinguishing among respondents because 93% of them rated it 6 or 7. The second most favored Likert item, rated 6 or 7 by 77% of our respondents, also loaded in this factor. The conceptual connection between the Well-Being item and the other two items in this factor (both Earner’s Priority) is not clear.
Overall, then, it is not surprising that this factor did not make any independent contribution to the respondent’s child support judgments.

Of greatest interest, however, was our finding that individual differences in the abstract principles endorsed were indeed systematically reflected in individual judgments of the child support patterns they provided in particular cases. This relationship could be most conveniently displayed by examining the support amounts estimated for respondents whose average rating on each of the three significant Likert factors was a standard deviation above or below the mean (but who were average on the other two significant Likert items). For each of these three Likert factors, the pattern of differences in support amounts, between respondents high and low on the factor, followed coherently from the attitudes that comprised it, as did the differences between estimated support amounts for those high or low on a factor and those average on all three factors.

Respondents high on Factor One, Gross Disparity Plus, consistently favored higher support amounts than did those low on this factor. Moreover, the gap between the support amounts favored by each group was largest for the lowest income custodial parents–just the set of cases in which the living standard disparity between the two post-separation households would be greatest in the absence of large support awards. Those high on Gross Disparity Plus favored support awards that reduced this disparity by considerably more than the amount favored by those low in this factor. In the case of greatest income disparity, in which the custodial parent’s take-home pay was $1,000 a month and support obligor’s $6,000, high Factor One respondents favored support amounts almost half again that of the amounts favored by low Factor One respondents, $1,704 versus $1,172.

The differences between those high on Factor Two, Dual Obligation, and those low on this factor are also readily interpretable and in line with Theory. Most obviously, one would expect
low Dual Obligation respondents to be more forgiving of low-income NCP’s than are high Dual Obligation respondents, and they consistently are. But this fact is just part of the reason for another difference that we see: there is considerably more compression in the range of support amounts favored by those high on Dual Obligation, as one increases NCP income, than by those low on it. This range compression is particularly evident in the case of the high income CP: support amounts for low Dual Obligation respondents ranged from $268 to $805, as NCP income increases, while high Dual Obligation respondents range from $434 to $741. This relatively compressed pattern is also evident for middle and low CP incomes, although the difference in range between the two groups becomes less pronounced as CP income declines.

This pattern follows logically from the attitudinal differences between the two types of respondents. The high Dual Obligation respondents should be more focused than those low on this factor in ensuring a meaningful contribution from the NCP in every case. In contrast, those low on this factor should be more responsive, than those high on it, to claims that the CP’s income is sufficient to provide adequately for the child, thus reducing the need to require much child support. This kind of claim for less support is most persuasive when CP income is highest, and therefore the difference between low and high Dual Obligation respondents should be greatest at high CP incomes, where the resistance of high Dual Obligation respondents to such claims for lower support amounts will have the greatest relative impact. Consider also that when CP income is high and NCP income is low, Gross Disparity concerns are muted and Dual Obligation becomes the only reason to require support; Thus the vignettes with high CP income and low NCP income are precisely the ones where we should expect the biggest differences in child support amounts between those high and low on Dual Obligation. That is exactly what we find.
Another way to examine these same points is to compare those high on one Likert factor to those who are average on all three factors. Table 9 shows this comparison by presenting the dollar support amounts as ratios in which the denominator is the support amount for the respondent who gave an average rating on all three Likert factors, and the numerator is the support amount, respectively, for those high on one factor but average on the other two. Thus, for each factor, we have a measure of the support amount favored by those high on that factor, for every case, relative to the amount favored by the respondent who is average on all three factors.

Table 9. Average Support Amounts for those High on each Likert Factor, As a Ratio to the Average amount for Respondents Average on All Three Factors

<table>
<thead>
<tr>
<th>CP</th>
<th>INCOME</th>
<th>Ratio to Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>INCOME</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000 4000 6000</td>
</tr>
<tr>
<td>Income 1000 Average</td>
<td>1.00 1.00 1.00</td>
<td></td>
</tr>
<tr>
<td>High GD</td>
<td>1.17 1.17 1.17</td>
<td></td>
</tr>
<tr>
<td>High DO</td>
<td>1.04 1.00 0.99</td>
<td></td>
</tr>
<tr>
<td>High LF</td>
<td>0.89 0.88 0.88</td>
<td></td>
</tr>
<tr>
<td>Income 3000 Average</td>
<td>1.00 1.00 1.00</td>
<td></td>
</tr>
<tr>
<td>High GD</td>
<td>1.13 1.14 1.15</td>
<td></td>
</tr>
<tr>
<td>High DO</td>
<td>1.21 1.03 0.97</td>
<td></td>
</tr>
<tr>
<td>High LF</td>
<td>0.95 0.88 0.86</td>
<td></td>
</tr>
<tr>
<td>Income 5000 Average</td>
<td>1.00 1.00 1.00</td>
<td></td>
</tr>
<tr>
<td>High GD</td>
<td>1.06 1.09 1.10</td>
<td></td>
</tr>
<tr>
<td>High DO</td>
<td>1.46 1.09 0.95</td>
<td></td>
</tr>
<tr>
<td>High LF</td>
<td>1.04 0.89 0.83</td>
<td></td>
</tr>
</tbody>
</table>
Consider first those high on Gross Disparity. We might generally expect these respondents to favor higher support amounts than those average on all three factors. On the other hand, there is less reason to expect that pattern to prevail when the CP’s income is higher than the NCP’s, since in that case there is no income disparity in the NCP’s favor and the Gross Disparity principles do not apply. Our relative measure of support amounts displayed in Table 9 presents just this pattern: the support amounts favored by those high on Gross Disparity go up with NCP income and down with CP income.

Consider next those high on Dual Obligation. As suggested earlier, we would expect these respondents to be less forgiving of low income NCP’s than the respondent who is average on all three factors. On the other hand, they should respond less to increasing NCP income than the average respondent, for whom income disparities are more important, relative to Dual Obligation. High Dual Obligation individuals should also be less responsive to increases in CP income, since, relative to the average respondent, their focus is more on ensuring a meaningful payment from the NCP and less on disparities in outcome between CP and NCP. All together then, the relative support amounts for High Dual Obligation respondents should go up, as CP income goes up, but should go down, as NCP income goes up. This is precisely the pattern revealed by Table 9.

Finally, consider the third significant factor, Limiting Father’s Responsibility. In all nine cases presented to respondents, those low on this factor favored higher support amounts than those high on this factor, which is the result one would expect. This factor incorporates items expressing the view that the father’s responsibility should not extend past ensuring the child with some minimally acceptable living standard. One who agrees with those items should not raise child support as much, with rising NCP income, as should those who disagree with them. And this is
what happens: not only to do those high on this factor favor lower child support amounts at low NCP incomes, they also raise the amount of the support they would require less rapidly, with rising NCP income, than do those low on the factor. This can be seen most easily by looking at Figure 7, where one can see that the slope of the lines showing support amounts for low Limiting Responsibility are steeper than for those high on the factor. One can also see from Table 9 that, as expected, those high on this factor generally favor smaller support amounts than those average on all three factors; the only exception among the nine vignettes is the unusual case in which the CP’s income is highest and the NCP’s lowest.

We must admit that we are startled ourselves by the high degree of coherence our lay judges showed, and in the extraordinary correspondence between their endorsement of abstract principles and their resolution of specific cases. One must remember that our respondents were not asked to set the support amounts in the individual vignettes according to any consistent set of principles. To the contrary, they were told there was no right or wrong answer, that in each case they were just to choose or name the dollar support amount that they believed “right”. Only after completing that task were they asked to think about support principles, in a series of Likert items presented to them in no particular sequence. The coherence of their answers to the vignettes demonstrates that some set of principles guided our respondents’ answers. That does not mean that their answers to the vignettes were generated by deduction from basic principles. The principles they employed were more likely unarticulated and intuitive.

In our earlier paper (Ellman, Braver & MacCoun, 2009) we inferred the principles they employed from their answers to the vignettes, in a “policy capturing” exercise. We demonstrated that while there was considerable dispersion among our respondents in the absolute amounts of
their child support judgments, there was great consistency across respondents in the adjustments they made to support amounts, from case to case, as parental incomes changed. They thus exhibited a pattern found in other contexts as well, called “coherent arbitrariness” by Ariely, Loewenstein and Prelec (2003): arbitrariness in absolute judgments, or their starting point; coherence in relative judgments from that starting point. The analysis of this paper sheds further light on the nature of that arbitrariness. Through their answers to the Likert items, we uncover three attitudinal factors that predict the individual starting points and reflect the intuitive principles our respondents employed to choose them. And in addition, these three factors also seem to affect the small amount of variation among our respondents in their relative judgments.

The coherence we found between our respondents’ endorsement of abstract principles and their resolution of particular cases suggests that although lay judges employ heuristics when asked to make tradeoffs, the heuristic employed varies from individual to individual in ways that conform each individual’s judgments in cases to the abstract principles that the individual intuitively endorses. Their ability to do this is surely encouraging as well as surprising. We know that Individuals disagree about the resolution of particular cases, but their disagreements may not be quite so arbitrary as we might have thought, as they in fact emerge from principled differences between them. They may not always be able to articulate those principles, but it seems they can be uncovered.

We have no reason to believe that asking individuals to set child support amounts is different in kind from asking them to make other judgments requiring tradeoffs, but further research can establish whether the the coherence we found between principles and cases is sensitive to the lawmaking domain. It may also be that the sequence in which we presented our
respondents with the vignette and Likert tasks is important to these results. Working through a set of individual cases first may have prepared our respondents to answer the later Likert items more consistently, both internally and with respect to their earlier judgments in individual cases, than they would have done if the sequence were reversed. That is a question we hope to explore in future studies.