University of Nebraska - Lincoln DigitalCommons@University of Nebraska - Lincoln

Faculty Publications, Department of Psychology

Psychology, Department of

2018

Does Joint Physical Custody "Cause" Children's Better Outcomes?

Sanford L. Braver Arizona State University, sanford.braver@asu.edu

Ashley M. Votruba University of Nebraska-Lincoln and Arizona State University, ashley.votruba@unl.edu

Follow this and additional works at: https://digitalcommons.unl.edu/psychfacpub

Part of the Psychology Commons

Braver, Sanford L. and Votruba, Ashley M., "Does Joint Physical Custody "Cause" Children's Better Outcomes?" (2018). *Faculty Publications, Department of Psychology*. 903. https://digitalcommons.unl.edu/psychfacpub/903

https://ugnatcommons.uni.edu/psychiacpub/903

This Article is brought to you for free and open access by the Psychology, Department of at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Faculty Publications, Department of Psychology by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.



Published in *Journal of Divorce & Remarriage* 59:5 (2018), pp. 452–468; doi: 10.1080/10502556.2018.1454203 Copyright © 2018 Taylor & Francis/Routledge. Used by permission. Published online April 13, 2018.

Does Joint Physical Custody "Cause" Children's Better Outcomes?

Sanford L. Braver¹ and Ashley M. Votruba^{1,2}

- 1. Department of Psychology, Arizona State University, Tempe, Arizona, USA
- 2. Department of Psychology, University of Nebraska-Lincoln, Lincoln, Nebraska, USA

Corresponding author – Sanford L. Braver, Department of Psychology, Arizona State University, PO Box 871104, Tempe, AZ 85287-1104, email <u>sanford.braver@asu.edu</u>

Abstract

Policymakers and researchers are concerned with whether joint physical custody (JPC) produces better outcomes for children than sole custody. Although several review articles summarizing up to 61 empirical articles demonstrate very positive answers, many of the research designs used compromise the ability to claim that it is JPC per se—and not selection effects—that causes the effect. We discuss several research design issues, such as propensity score analysis, that can more powerfully probe the question of causality. Some studies have already been conducted employing these strategies and more are recommended and likely to soon be forthcoming. On the basis of this comprehensive review we conclude that JPC probably does cause benefits to children on average, and that social scientists can now provisionally recommend rebuttably presumptive JPC to policymakers.

Keywords: joint custody, shared parenting, causal inference, divorce

Research generally suggests that children of divorce are at increased risk for social, psychological, and educational difficulties (Braver & Lamb, 2012; Chase-Lansdale, Cherlin, & Kiernan, 1995; Cherlin et al., 1991). Thus, when it comes to family law and custody determination, policymakers and researchers are concerned with knowing what types of postseparation parenting arrangements are generally the most beneficial for children. More specifically, interest has focused on whether joint physical custody (JPC) produces better outcomes for children than sole maternal physical custody (SPC). Another related question is how well JPC works when there is parental conflict or when one or both parents did not want JPC.

A handful of review articles have examined the large number of studies that have addressed these questions and generally found that children with JPC arrangements were significantly better off than those in SPC (generally maternal custody) arrangements (Baude, Pearson, & Drapeau, 2016; Bauserman, 2002; Nielsen, 2015, 2017). Bauserman (2002) performed a meta-analysis on 33 studies with a combined sample size of more than 2,650 children, of whom about one-third had JPC arrangements. Children with JPC plans scored significantly higher on adjustment measures compared to children in sole custody. This was true for nearly all categories of adjustment (except academic adjustment), including general measures of adjustment, family relations, self-esteem, emotional adjustment, behavioral adjustment, and divorce-specific adjustment. This suggests that JPC can benefit children in a wide range of domains. Baude et al. (2016) replicated this finding in a metaanalysis of 17 studies that included some 36,000 families.

Nielsen also updated the Bauserman (2002) review in 2015, citing 40 studies, then again in 2017, summarizing 54 studies, and most recently summarizing 61 studies (Nielsen, 2018). In all three reviews she found that children with JPC arrangements were generally better off than children with sole custody arrangements. Across these studies, children with JPC arrangements showed (a) better grades and cognitive development; (b) lower levels of depression, anxiety, and dissatisfaction; (c) lower aggression, drug use, and alcohol use; (d) better physical health and lower smoking rates; and (e) better father-child relationships. Nielsen (2015) also concluded that the benefits of JPC arrangements occur even when there is parental conflict. Nielsen (2015) explicitly noted that in 11 of the 40 studies, the researchers stated that their sample included high-conflict and litigating parents. Further, in 16 of the studies, either the parents with a JPC arrangement had as much conflict as those with sole custody arrangements, or the outcomes remained better for JPC children even controlling for parental conflict.

Despite being armed with this robust and consistent recent literature attesting to the substantial benefits of JPC, advocates have run into consistent opposition in converting the findings into a legal presumption: an assumption made and accepted by a court as a basis for their decision in the case to be decided. Generally, presumptions in family law are considered rebuttable and are accepted by the court until disproved. The assumption "will stand as a fact unless someone comes forward to contest it and prove otherwise" (Rebuttable Presumption Law and Legal Definition, 2017). In family law, for example, the child support amount arising from each state's child support guidelines constitutes a rebuttable presumption of the proper child support award (Elrod, 1990). Proponents of JPC have engaged in many unsuccessful attempts to pass laws making JPC a presumption that is rebuttable on showing that, for some specifiable legal reason, such an arrangement should not be considered in the child's best interest in the particular case.

One of the key sources of opposition to making JPC a legal presumption arises because of scientific considerations.¹ The objection focuses on a certain limitation of the research design historically used by the vast majority of the studies comparing the impact of JPC and SPC arrangements. This research design has been termed the static group comparison (Campbell & Stanley, 1963) and is often also referred to as a cross-sectional study. A static group design compares two or more preexisting groups. In this case the research compared families with JPC arrangements to those with SPC arrangements—generally maternal custody. The term *cross-sectional* (implying a single point in time, with preexisting groups) is generally contrasted with the longitudinal study (implying multiple points in time). The limitation of this design generally ensues from the fact that there is "no formal means of certifying that the groups would have been equivalent had it not been for" the custody arrangement (Campbell & Stanley, 1963, p. 12). Whatever the basis is under which the individuals become sorted into groups represents *selection*, which constitutes a substantial threat to the internal validity of the causal conclusion.

For the issue at hand, it is mostly *self*-selection that comprises the most plausible alternative explanation for the differences found between JPC and SPC children. Specifically, during the historical period when many of the JPC studies were conducted, families were granted JPC only if both parents (more or less) freely declared that this was the arrangement they preferred. If either parent declared that he or she was unalterably opposed to such an arrangement, the courts would typically not grant it. Thus, JPC was virtually never imposed on consistently unwilling families—in some instances because the statutes specifically precluded it. Thus, couples in which both parents wished for JPC-which was a distinct minority (Braver & O'Connell, 1998; Maccoby & Mnookin, 1992)—were compared to couples in which one or both parents opposed it. Hence, the sorting into the two comparison groups was based nearly entirely on the parents' own decisions, resulting in selfselection. It is also well known that many discernable factors, as identified later in this article, might discriminate between couples making these two choices and that these factors often are also associated with better child outcomes regardless of the custody arrangement. This is an important methodological limitation because it could be these self-selection factors, rather than the custody arrangement per se, that accounts entirely for the advantages found for JPC children.

The reality of this methodological limitation found in much of the research on JPC has implications both for scientific inquiry and for policy development. Scientifically speaking, when exploring a cause-effect relationship, if any plausible alternative explanation happens to be entirely responsible for the effect, the causal conjecture is thereby invalidated. Specifically, if selection accounts for the entirety of an effect, then enacting the "cause" variable will not have the anticipated impact on the "effect" variable. In terms of custody policy, if the JPC arrangement is not the cause of the benefits, if instead self-selection happens to account for all the positive findings, imposing JPC (rather than letting parents choose it) will not have the mostly beneficial effects indicated by the research, as noted by Bauserman (2002), and Fehlberg and colleagues (2011). Thus, a presumptive law, which would impose JPC over the opposition of one of the parents, might fail to create the intended benefits. As Emery, Otto, and O'Donohue (2005) concluded from research using this methodology, "we cannot extrapolate from voluntary joint physical custody to circumstances when joint physical custody is imposed upon parents by laws favoring joint physical custody ... or by judges who order it" (pp. 16–17).

Although the static group research design with self-selection into comparison groups has clear limitations for assessing causality, other methodological approaches offer greater promise. The gold standard methodological approach that can fully overcome the barriers to drawing causal conclusions is the randomized experiment (Cook & Campbell, 1979). For example, if couples were assigned at random to either JPC or to SPC, any subsequent differences in children's well-being could be unambiguously attributed to the custody arrangement. It is true that family courts have on relatively rare but increasingly common occasions been convinced to deploy random assignment for various purposes (Ballard, Holtzworth-Munroe, Applegate, D'Onofrio, & Bates, 2013; Beck et al., 2009; Braver, Sandler, Hita, & Wheeler, 2016; Mauricio et al., 2017; Rossi et al., 2015; Sandler et al., 2016; Winslow et al., 2017). Nonetheless, there has never been and never will be an instance of judges assigning custody of children at random. Thus, although conducting a randomized experiment would clearly be the best methodological option for assessing the causal mechanism, it is out of the question.

Research designs that probe causality

There are, however, a number of additional methodological approaches that would allow researchers to probe causality, albeit not prove it. The inability—for practical, ethical, or physical reasons—to assign treatments at random is an extremely common one in social science and even physical science. This problem has prompted a great deal of recent scholarly work devoted to going beyond static group comparisons to render causal inferences more credible. These approaches include (a) employing statistical controls; (b) propensity score analysis; (c) natural experiments; and (d) regression discontinuity or interrupted time series quasi-experiments. In regard to JPC and SPC children's outcomes, two more approaches present themselves: (e) differentiating the findings on the basis of parents' initial custody preferences; and (f) examining outcomes in jurisdictions where JPC is already a presumption or a norm.

Statistical controls

The most common approach to strengthen the possibility of establishing causality is to employ statistical controls. The intent of this technique is to statistically hold constant, adjust for differences in, covary out, partial out, control for, correct for, or equate for (all preceding terms are essentially synonyms) these self-selection factors. According to the Berkeley Glossary of Statistical Terms, "to control for a variable is to try to separate its effect from the treatment effect, so it will not confound with the treatment" (in this case, the custody arrangement; Stark, 2017). It is important to recognize that such research takes place under one of two distinct statistical approaches. The first is the group-oriented approach that treats JPC and SPC families as two distinct classes of people. Group-oriented approaches, in general, use independent group t tests and analysis of variance (ANOVA) as their main statistical tools. When they attempt to control for any variables, they move to an analysis of covariance (ANCOVA), to "covary out" the possible confound. The second approach treats most of the variables as continuous ones, not as classes or groups. This approach uses multiple regression as its main statistical tool. Typically multiple regressions will treat JPC versus SPC as a dummy or binary variable, and enter it into the analysis after the control variables have been entered. In this (or in another equivalent) way, the self-selection variables are controlled for or partialed out, allowing a firmer inference that

it is the custody arrangement per se that is responsible for the outcomes. The regression approach and the ANCOVA approach yield virtually identical results and are merely two different but equivalent approaches (Huitema, 2011).

In JPC and SPC studies, most researchers consider parent conflict and family income to be the two most important self-selection factors in that both are thought to powerfully affect both the self-selection of JPC arrangements and child well-being. Accordingly, quite a large number of recent studies have attempted to control for these two factors in evaluating the impact of JPC. Nielsen (2018) cataloged these 60 studies. Of the 36 studies that considered parental conflict, JPC children had better outcomes on all measures in 18 studies, equal to better in 11 studies, equal in 3 studies, and worse outcomes on one of the measures in 4 studies. In the 42 studies that considered family income, JPC children had better outcomes in 9 studies, equal outcomes in 4 studies, and worse outcomes on one measure but equal or better outcomes on other measures in 4 studies. As Nielsen (2018) also pointed out, the links between income and children's well-being in the vast literature on this topic actually find only weak and indirect effects, with the exception of children growing up in poverty.

Although the two self-selection factors of income and parental conflict are often seen as the most consequential, they certainly do not exhaust the list of potential factors influencing children's outcomes. This fact is critical because the effectiveness of the statistical control approach is greatly compromised if other selection factors are strongly at work. Among these additional factors might be mother's and father's level of education, the child's age, the parents' ages, which parent wanted the divorce, each parent's mental health, how guilty each parent felt about the breakup, and so on.

One study was quite comprehensive in identifying which factors might set JPC and SPC parents apart (Gunnoe & Braver, 2001). This study was somewhat unique in that it was both longitudinal and captured data before the divorce was final—that is, before any custody arrangement became official. In fact, the initial interview with the parents took place within a short 2.5 months after the initial petition for divorce, which starts the legal process of divorcing. The study assessed fully 71 predivorce variables, including all the ones mentioned earlier, that might plausibly differentiate between families who ultimately obtained joint legal versus sole legal custody (with maternal physical custody). Twenty of the 71 factors indeed discriminated at a statistically significant level parents who ultimately obtained sole or joint legal custody. All 20 factors were then simultaneously controlled in a subsequent ANCOVA comparison of the 52 sole and 26 joint legal custody families 2 years postdivorce. The children in the families with joint legal custody continued to have fewer adjustment problems than children in sole custody families, over and above the predivorce selection factors. It should be noted that it was legal custody, rather than physical custody that was at issue here, because the study was conducted at a time before there were sufficient numbers of JPC cases to yield adequate statistical power. Note, however, that Bauserman's (2002) metaanalysis found that that joint legal custody and JPC bestowed largely equal benefits. It is also important that the more positive outcomes for JPC children were not moderated by the level of predivorce conflict between the parents.

In conclusion, statistical controls, the most ubiquitous approach to dealing with the selfselection confound, have shown rather overwhelmingly that JPC confers substantial benefits to children over and above, or independent of, self-selection factors.

Propensity score analysis

Propensity score analysis is a relatively new technique that deals with the issue of static or preexisting groups by providing another means for equating the groups on a large number of variables (covariates) measured at a baseline point (West, Cham, Thoemmes, et al., 2014). Once they are "equated" at baseline (via matching, stratification, weighting, or ANCOVA) on all the covariates (e.g., parental conflict) that predict group selection, the comparison of the groups' differential outcomes rules out the effect of these potential confounding factors (Shadish, Cook, & Campbell, 2002; West, Cham, & Liu, 2014). This strongly enhances the internal validity of the study and thereby the inference of causal impact.

Propensity score analysis is an upgrade from traditional approaches that equate groups on only a few variables, instead allowing equating on a large number of baseline covariates simultaneously by creating a single propensity score that summarizes all of the covariates. The score is typically constructed using a logistic regression equation in which the full set of covariates is used to predict group membership. Unlike traditional approaches, however, it leaves out simultaneous consideration at this stage of the outcome variable of interest. Essentially, the "propensity score is the predicted probability that the person will be assigned to the treatment group based on his or her scores on each of the full set of covariates" (West, Cham, Thoemmes, et al., 2014, p. 908). If the groups are successfully equated, then it is possible to arrive at an unbiased estimate of the causal effect of the treatment. In our case, it would thus be possible to examine what causal effect JPC or SPC had on child well-being. However, propensity score analysis has advantages over regressionoriented statistical controls because it assesses overlap of the two groups being compared; it makes no assumptions about the functional form of the relationship between the covariate and selection, such as linearity; it allows nonparametric as well as parametric conditioning; and it allows checks of the putative selection model.

One of the challenges of performing propensity score analysis is that to get an accurate propensity score, it is necessary to measure all or nearly all covariates that might be confounded with self-selection into JPC or SPC arrangements and child well-being (West, Cham, Thoemmes, et al., 2014). This could mean measuring a very large number of potential covariates at baseline. In addition to new data collection efforts, researchers can consider secondary analysis of data sets that included many potential such covariates that have already been collected, as did Gunnoe and Braver (2001).

To our knowledge, no researcher has yet attempted to use this powerful and sophisticated methodology to examine the causal effect of custody arrangements on child wellbeing. Because propensity score analysis achieves results close to those of a randomized experiment (Cook, Shadish, & Wong, 2008; Shadish, Clark, & Steiner, 2008), we believe this is a strong candidate for future research.

Natural experiments

Natural experiments also often allow causal conclusions to be fairly made. In natural experiments, the assignment to a treatment condition is not made at random by the researcher but is made instead by some independent event; for example, nature, the weather, sickness, or policy changes. The key to whether the causal inference is valid in any natural experiment is whether "the event . . . allows for the random *or seemingly random* assignment of study subjects to different groups" (Messer, 2017, italics added).

Because custody laws are a matter of much legal and cultural ferment and change, new laws and new court holdings are constantly coming into being. Comparing couples assigned by some means to JPC to couples assigned to SPC could plausibly constitute a natural experiment that would allow causal inferences about the custody arrangement's impact on child outcomes. The validity of such an inference rests completely on the exact nature of the design, however. Consider, for example, a hypothetical study comparing couples who divorced before a JPC presumption took effect to another group of couples who divorced after the presumption took effect. Only to the degree that we might fairly regard as "random or seemingly random" whether the exact date of each specific case's divorce decree fell either before or after the law change would the causal inference about the impact of the JPC presumption on the child's well-being be valid. When other potential causes of any differences in child outcomes found might also be plausible, they constitute clear threats to the internal validity of the inference. For example, if "other change-producing events" (p. 7) that might affect the children's outcomes have occurred between the two observation points (e.g., economic downturns, housing collapses), the inference risks invalidity. Such an other event "becomes a more plausible rival explanation of change the longer" (p. 7) the interval between the two observations. Thus, studies that let only small intervals (i.e., a few months) intervene between the divorce dates of the couples in the two regimes are on more solid footing with causal claims.

We are aware of no solid empirical investigations of JPC's impact on child outcomes that employed such a natural experiment, but are mindful that these could be profitably deployed by alert investigators whenever the passage of a presumptive law seems imminent. With more than 20 states and numerous countries currently debating new JPC presumption laws (Leading Women for Shared Parenting, 2017) researchers should note the important opportunity that exists to study a random sample of families before and another random sample after such a law takes effect.

It might appear that another natural experiment opportunity exists by comparing two nearby jurisdictions with different custody laws, but this rarely is valid. For example, Douglas (2003) compared a sample of parents from New Hampshire, which had recently passed a presumptive joint legal custody law, to a sample from Maine, which did not have such a presumption. The samples were chosen from six counties matched on several demographic factors. However, although matched on some variables, many other differences between the jurisdictions exist, such as radically different child support regimes. Many or all of these differences could plausibly account for any impact of the new presumption. Thus, Douglas (2003) admitted that "more well-controlled designs are greatly needed" for sound inference (p. 9). In summary, comparing different jurisdictions at the same time generally constitutes an invalid variant of natural experiment with which to evaluate the causal impact of JPC on child outcomes.

Quasi-experimental designs: regression discontinuity or interrupted time series

One of the most important contributions of Campbell and Stanley's (1963) work was to identify an extremely important class of research designs, new at the time, they termed *quasi-experiments*. These designs are admittedly less conclusive than randomized experiments, but, when well conducted, only marginally so. The two quasi-experimental designs we highlight here are the ones best suited to the evaluation of JPC arrangements or presumptions on child well-being: regression discontinuity or interrupted time series. For our purposes, these terms are largely interchangeable, and we refer to it as RD-ITS, accordingly.

Whereas a simple pre- and post-test design is very susceptible to the argument that other causes might have intervened between the two measurement occasions, the RD-ITS approach minimizes that threat to internal validity by considering many pre-test points and many post-test points. Figure 1 illustrates this approach: It gathers a sample of many pre-law-change cases and many post-law-change cases and plots them all on the horizontal axis by the date of the final decree. The child well-being measure(s) for each case are plotted on the vertical axis. If the law had an impact on child well-being (or any other relevant outcome measure) it should be evident by an abrupt discontinuity or jump in the trend line tracing the average outcomes over time. Any alternative explanation of the child outcome results other than the causal impact of the JPC presumptive law taking effect would have to pass the considerable hurdle of explaining why the impact occurred at that one exact point in time.

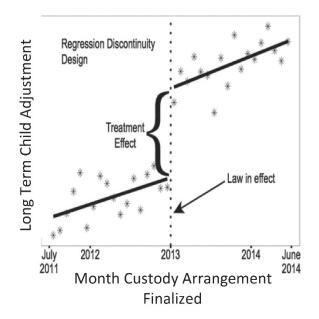


Figure 1. Regression discontinuity design.

Although we are aware of no existing study that used such a design to study the impact of JPC presumptions on child outcomes, work preliminary to an analysis of the introduction of Arizona law has been conducted by Fabricius and Millar. Moreover, the design can be used to evaluate other interventions in the family law environment. For example, DeLusé and Braver (2015) used such a design to evaluate a divorce education program and deemed such an evaluation rigorous.

Differentiating on the basis of parents' initial preferences

In evaluating the causal impact of JPC arrangements on child well-being, another methodological strategy rather uniquely presents itself. This occurs because there are two parents, and they might in fact agree initially on a JPC arrangement, or they might initially disagree. With one parent initially against it, JPC sometimes nevertheless prevailed, infrequently because a court decision overruled that parent, and more commonly because the opposing parent later withdrew his or her opposition, perhaps because of professional advice or under pressure of some kind. Braver and O'Connell (1998) and Maccoby and Mnookin (1992) found that initial mutual agreement on joint custody is relatively rare, between 18% and 23%. Fabricius, Braver, Diaz, and Velez (2010), among others, discussed the many avenues in which the bargaining process between the ex-spouses can be influenced by the "guidance about their chances they receive from judges, attorneys, custody evaluators, parent educators, and mediators" (p. 257). Mnookin and Kornhauser (1979) famously called this "bargaining in the shadow of the law." Braver, Cookston, and Cohen (2002) presented evidence that it is the parents' lawyers, in particular, that often influence the process, leading parents to not pursue their initial preferences by advising them about their "likelihood of prevailing" in seeking the arrangements they prefer. If analysts have access to information about the two parents' initial preferences prior to the decree, they could compare the child outcomes of the "both initially agree on shared" to the "one initially wanted sole but 'caved''' groups to probe the impact of the self-selection alternative explanation. If selfselection is responsible for the benefits of JPC that have been documented, we should expect that children for whom both parents voluntarily selected JPC will have better outcomes than those for whom one parent initially opposed it. Nielsen (2014) identified six studies that catalog parents' initial agreements or lack thereof about the eventual parenting plan (Braver & O'Connell, 1998; Brotsky, Steinman, & Zemmelman, 1988; Fabricius & Suh, 2017; Luepnitz, 1986; Maccoby & Mnookin, 1992; Pearson & Thoennes, 1990). Most of these are longitudinal, having assessed parents' initial preferences before the decree was final. The study by Leupnitz (1986), however, is not longitudinal and simply stated, without explanation of how it was determined, that "in only 54% of the joint cases had parents agreed from the outset on some form of shared custody. In the remaining cases there was conflict over the question of custody initially" (p. 3). Finally, Fabricius and Suh (2017) assessed initial agreement about custody arrangements by retrospective report. The six studies in general do not find lower benefits of JPC for the group of parents who initially disagreed; rather, the benefits of JPC held even when one parent disagreed on the arrangement, undermining the notion that self-selection accounts for the totality of JPC benefits.

We encourage researchers with longitudinal data sets with parents' initial custody preferences recorded to harness this power with additional secondary analyses. Notably, Maccoby and Mnookin (1992) have a large data set that is publicly available at http://www .socio.com/fam2527.php. This could be leveraged to address this and other important causal questions, but to our knowledge it has not been done.

We should also note the inferential power of longitudinal studies more generally. Analyses such as cross-lagged panel studies and structural equation models at different periods of time are generally regarded as greatly enhancing the ability to make causal inferences even without random assignment. It has long been noted that family law research needs more longitudinal studies (e.g., Braver & Lamb, 2012; Braver et al., 1993).

Examining outcomes in jurisdictions where it is already a presumption or a norm

Finally, yet another inferential approach is or is rapidly becoming available in the present instance to evaluate this article's central question. However, this final approach skirts the causal question per se and instead addresses the related question of whether the benefits of JPC arrangements found in the literature will continue to hold when such arrangements are a rebuttable presumption, or when imposed on parents against their will. It turns out we have such evidence by examining jurisdictions where JPC is already a presumption, or where there are already strong norms upholding it. Because JPC practices are rapidly becoming more widespread throughout the United States and world, several jurisdictions now have large portions of the recent divorce cases adopting JPC, some of which were presumably initially disinclined. Among these jurisdictions are several European countries, including Sweden, Belgium, and Australia, and several states, including Arizona and Wisconsin. By examining child well-being or other relevant outcomes in samples of recent divorces in these locales it is possible to glean answers regarding how well it works when it is imposed, perhaps over the initial objections of one of the parents.

Most of these law reforms are too fresh to permit sensitive analyses of longer term impacts of the presumption or practice. Consequently, it is too soon to have many published evaluations. The Arizona presumptive law, however, had a recent cursory evaluation that is summarized in Fabricius, Aaron, Akins, Assini, and McElroy (2018). It found that the law appears to be having a positive effect and is in the child's best interests.

The country with the most mature law and practice as well as rigorous recent evaluations is Sweden. The articles in this issue by Nielsen and by Bergstrom summarizing the Swedish research indicate both that the arrangement has become a "new norm" and that children who spent equal time living with both parents after a separation reported better well-being than children in predominantly single parent care.

As noted, the move toward making JPC the substantially normative option is very recent. Thus it is premature to expect a plethora of these types of well-designed studies assessing what happens when large swaths of couples, which include the many couples where at least one of the parents is unenthusiastic about the arrangement, have JPC imposed on them because of legal reform. Scholars, advocates, and decision makers should be very alert for when evaluations of these situations emerge and become part of the literature. It is noteworthy, though, that virtually all the studies to date support the proposition that JPC is in children's best interests even when one parent opposes it.

Conclusion

The central question posed by this article is whether JPC causes better outcomes for children, and to describe those research designs that can better help us answer this question. It is difficult to draw causal conclusions from older research in this area because the studies use primarily static group comparison research designs with self-selection into comparison groups, which confounds the causal question. Because a random assignment experiment is unlikely to ever occur, it is a certainty that such causality will never be answered conclusively. However, several other approaches are beginning to be employed with more frequency that can probe causality. Some recent studies exploiting such analyses have already been reported, and others should be expected in the near future.

The weight of the recent evidence indicates that self-selection effects do not largely account for the benefits of JPC in the empirical literature. Over a wide variety of methodological approaches and for the vast majority of findings to date, it appears that the benefits of JPC for children are not primarily due to the fact that a unique set of families choose it. Thus, evidence from recent research is discrediting the major rival explanation—that the better child outcomes observed in JPC are merely the result of self-selection. Infirming the primary alternative explanation has the compensatory effect of supporting the original causal proposition (Cook & Campbell, 1979). Thus, we conclude that JPC probably does cause benefits to children on average. It should go without saying that the final two words in the preceding sentence are absolutely necessary. Although the general tendency across all individuals merits this conclusion, it certainly might not apply to all individual child custody cases. However, whether we currently have the requisite expertise to permit inferences about the likely impact in any particular case is debatable (Emery, Otto, & O'Donahue, 2005; Kelly & Ramsey, 2009; Stevenson, Braver, Ellman, & Votruba, 2012). "Bottom line: much as it may be desirable, we may really not know how to properly individualize, tailor, or custom-fit parenting plans to achieve the best possible outcomes in each case. If this is true, the effort and expense and time and trouble taken in the futile pursuit of case-specific fittings come with little in the way of corresponding benefits. And, in such a case, it is better to have a rule or starting place that covers the majority of cases and families, with, of course, the ability to deviate when the fit is obviously bad" (Braver, 2014, p. 177).

Similarly, with the recent increased use of methodologically advanced research designs, we regard the evidence to now be sufficiently deep and consistent to permit social scientists to provisionally recommend presumptive JPC to policymakers. As always, the presumption should be rebuttable; that is, although on average JPC can now be confidently predicted to bestow benefits on children, there are certainly situations where JPC would be unwise. Researchers can assist the enterprise of identifying these exceptions by engaging in systematic efforts to identify subgroups for whom the usual conclusion does not fit. One way to do this is to investigate interaction effects (e.g., custody arrangement by conflict interactions) on the child outcomes.

The term *provisionally* is used here, because we hope and expect researchers will keep studying the matter, especially with rigorous analyses of the type identified in this article. Consumers of this research also need to be alert to new findings that continue to affirm the conclusions here—or perhaps that oppose it. We might aptly characterize the current state

of the evidence as "the preponderance of the evidence," meaning that there is substantially more evidence for the presumption than against it. A great many studies, with various inferential strengths, suggest that JPC will bestow benefits on children on average, and few if any studies show that it instead harms them. We note a kind of personal natural before and after experiment in this regard. About 20 years ago, the first author wrote, "There is simply not enough evidence available at present to substantiate routinely imposing joint residential custody . . . there are too few cases adopting [it] to perform statistical analyses" (Braver & O'Connell, 1998, p. 223). That was before. A large number of those studies have since been performed, and the state of the newer evidence is almost completely supportive. On this basis, we contend the burden of persuasion has shifted to those who oppose a presumption of JPC.

Note

1. There is also, of course, a very substantial literature that opposes shared parenting presumptions when domestic violence is evident or alleged (e.g., Greenberg, 2004; Morrill, Dai, Dunn, Sung, & Smith, 2005). Although these voices are persuasive, in general, the articles provide arguments, not quantitative empirical research findings. Because this article is devoted to research design issues within the quantitative empirical research literature, papers presenting arguments only are outside the scope of this article. In any event, proposed statutes often explicitly note that the existence of chronic, one-sided domestic violence should be a rebuttal factor. There are also voices that oppose shared parenting when there is high interparental conflict. For example, Stahl (1999), in his guide for professional custody evaluators, opined, "high conflict parents cannot share parenting" (p. 99). Similarly, Buchanan (2001) wrote, "when parents remain in high conflict, joint custody is . . . ill-advised" (p. 234). Emery (2009) wrote, "joint physical custody is the worst arrangement for children when [it] leaves [them] in the middle of a war zone. . . . In high conflict divorces, children do worse in joint physical custody than in other arrangements." Such claims are supposedly based on the quantitative empirical literature and therefore are included in our review here.

References

- Ballard, R., Holtzworth-Munroe, A., Applegate, A., D'Onofrio, B., & Bates, J. (2013). A randomized controlled trial of child-informed mediation. *Psychology, Public Policy, and Law, 19*, 271–281. doi:10.1037/a0033274
- Baude, A., Pearson, J., & Drapeau, S. (2016). Child adjustment in joint physical custody versus sole custody: A meta-analytic review. *Journal of Divorce & Remarriage*, 57, 338–360. doi:10.1080/ 10502556.2016.1185203
- Bauserman, R. (2002). Child adjustment in joint-custody versus sole-custody arrangements: A metaanalytic review. Journal of Family Psychology, 16, 91–102. doi:10.1037/0893-3200.16.1.91
- Beck, C., Holtzworth-Munroe, A., D'Onofrio, B., Fee, H., William, C., Hill, H., & Frances, G. (2009). Collaboration between judges and social science researchers in family law. *Family Court Review*, 47, 451–467. doi:10.1111/j.1744-1617.2009.01267.x
- Braver, S. (2014). Costs and pitfalls of individualizing decisions and incentivizing conflict: A comment on AFCC's think tank report on shared parenting. *Family Court Review*, 52, 175–180. doi:10.1111/ fcre.12079

- Braver, S., Cookston, J., & Cohen, B. (2002). Experiences of family law attorneys with current issues in divorce practice. *Family Relations*, *51*, 325–334. doi:10.1111/j.1741-3729.2002.00325.x
- Braver, S. L., & Lamb, M. E. (2012). Marital dissolution. In G. W. Peterson & K. R. Bush (Eds.), Handbook of marriage and the family (3rd ed., pp. 487–516). New York, NY: Springer.
- Braver, S. L., & O'Connell, D. (1998). Divorced dads: Shattering the myths. New York, NY: Tarcher/Putman.
- Braver, S. L., Sandler, I. N., Hita, L. C., & Wheeler, L. A. (2016). A randomized comparison trial of two court-connected programs for high conflict families. *Family Court Review*, 54, 349–363. doi:10.1111/ fcre.12225
- Braver, S. L., Wolchik, S. A., Sandler, I. N., Sheets, V., Fogas, B., & Bay, R. C. (1993). A longitudinal study of noncustodial parents: Parents without children. *Journal of Family Psychology*, 7, 9–23. doi:10.1037/0893-3200.7.1.9
- Brotsky, M., Steinman, S., & Zemmelman, S. (1988). Joint custody through mediation. Conciliation Courts Review, 26, 53–58. doi:10.1111/j.174-1617.1988.tb01038.x
- Buchanan, C. M. (2001). Divorce. In J. V. Lerner, R. M. Lerner, & J. Finkelstein (Eds.), Adolescence in America: An encyclopedia (pp. 232–235). Santa Barbara, CA: ABC-CLIO.
- Campbell, D. T., & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research on teaching. Boston, MA: Houghton Mifflin.
- Chase-Lansdale, P. L., Cherlin, A. J., & Kiernan, K. E. (1995). The long-term effects of parental divorce on the mental health of young adults: A developmental perspective. *Child Development*, 66, 1614– 1634. doi:10.2307/1131900
- Cherlin, A. J., Furstenberg, F. F., Jr., Chase-Lansdale, L., Kiernan, K. E., Robins, P. K., Morrison, D. R., & Teitler, J. O. (1991). Longitudinal studies of effects of divorce on children in Great Britain and the United States. *Science*, 252, 1386–1389. doi:10.1126/science.2047851
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis for field settings*. New York, NY: Rand-McNally.
- Cook, T. D., Shadish, W. R., & Wong, V. C. (2008). Three conditions under which experiments and observational studies produce comparable causal estimates: New findings from within-study comparisons. *Journal of Policy Analysis and Management*, 27, 724–750. doi:10.1002/pam.v27:4
- DeLusé, S., & Braver, S. L. (2015). A rigorous quasi-experimental evaluation of a mandatory divorce education program. *Family Court Review*, 53, 66–78. doi:10.1111/fcre.12131
- Douglas, E. M. (2003). The impact of a presumption for joint legal custody on father involvement. Journal of Divorce & Remarriage, 39(1–2), 1–10. doi:10.1300/J087v39n01_01
- Elrod, L. H. (1990). The federalization of child support guidelines. Journal of the American Academy of Matrimonial Law, 6, 103–130.
- Emery, R. (2009, May 18). Joint physical custody: Is joint physical custody best—or worst—for children? [Web log post]. Retrieved from https://www.psychologytoday.com/blog/divorced-children/200905/ joint-physical-custody
- Emery, R., Otto, R., & O'Donohue, W. (2005). A critical assessment of child custody evaluations— Limited science and a flawed system. *Psychological Science*, 6(1), 1–29.
- Fabricius, W., Aaron, M., Akins, F. R., Assini, J. J., and McElroy, T. (2018). What happens when there is presumptive 50/50 parenting time? An evaluation of Arizona's New Child Custody Statute. *Journal of Divorce & Remarriage*. doi:10.1080/10502556.2018.1454196
- Fabricius, W. V., Braver, S. L., Diaz, P., & Velez, C. E. (2010). Custody and parenting time: Links to family relationships and well-being after divorce. In M. E. Lamb (Ed.), *Role of the father in child development* (5th ed., pp. 245–289). Hoboken, NJ: Wiley.

- Fabricius, W. V., & Suh, G. W. (2017). Should infants and toddlers have frequent overnight parenting time with fathers? The policy debate and new data. *Psychology, Public Policy, and Law, 23,* 68–84. doi:10.1037/law0000108
- Fehlberg, B., Smyth, B., Maclean, M., & Roberts, C. (2011). Legislating for shared time parenting after separation: A research review. *International Journal of Law, Policy and the Family, 25, 318–337.* doi:10.1093/lawfam/ebr015
- Greenberg, J. G. (2004). Domestic violence and the danger of joint custody presumptions. Northern Illinois University Law Review, 25, 403–515.
- Gunnoe, M. L., & Braver, S. L. (2001). The effects of joint legal custody on mothers, fathers, and children, controlling for factors that predispose a sole maternal vs. joint legal award. *Law and Human Behavior*, 25, 25–43. doi:10.1023/A:1005687825155
- Huitema, B. (2011). The analysis of covariance and alternatives: Statistical methods for experiments, quasiexperiments, and single-case studies (2nd ed.). Hoboken, NJ: Wiley.
- Kelly, R. F., & Ramsey, S. H. (2009). Child custody evaluations: The need for systems-level outcome assessments. *Family Court Review*, 47, 286–303. doi:10.1111/j.1744-1617.2009.01255.x
- Leading Women for Shared Parenting. (2017). Twenty five states consider shared parenting bills in 2017. Retrieved from http://lw4sp.org/blog/2017/2/24/twenty-five-states-considershared-parenting-billsin-2017
- Luepnitz, D. (1986). A comparison of maternal, paternal and joint custody. Journal of Divorce, 9, 1–12. doi:10.1300/J279v09n03_01
- Maccoby, E. E., & Mnookin, R. H. (1992). *Dividing the child: Social and legal dilemmas of custody*. Cambridge, MA: Harvard University Press.
- Mauricio, A. M., Mazza, G. L., Berkel, C., Tein, J. Y., Sandler, I. N., Wolchik, S. A., & Winslow, E. (2017). Attendance trajectory classes among divorced and separated mothers and fathers in the new beginnings program. *Prevention Science*. Advance online publication. doi:10.1007/s11121-017-0783-3.
- Messer, L. C. (2017). Natural experiment. In *Encyclopaedia Britannica*. Retrieved from https://www. britannica.com/topic/natural-experiment
- Mnookin, R. H., & Kornhauser, L. (1979). Bargaining in the shadow of the law: The case of divorce. *The Yale Law Journal*, 88, 950–997. doi:10.2307/795824
- Morrill, A. C., Dai, J., Dunn, S., Sung, I., & Smith, K. (2005). Child custody and visitation decisions when the father has perpetrated violence against the mother. *Violence Against Women*, 11, 1076– 1107. doi:10.1177/1077801205278046
- Nielsen, L. (2014). Shared physical custody: Summary of 40 studies on outcomes for children. *Journal* of Divorce & Remarriage, 55(8), 613–635.
- Nielsen, L. (2015). Shared physical custody: Does it benefit children? *Journal of the American Academy* of Matrimonial Lawyers, 28, 79–139.
- Nielsen, L. (2017). Re-examining the research on parental conflict, coparenting, and custody arrangements. *Psychology, Public Policy, and Law*, 23, 211–231. doi:10.1037/law0000109
- Nielsen, L. (2018). Joint versus sole physical custody: Outcomes for children independent of family income or parental conflict. *Journal of Child Custody*. doi:10.1080/15379418.2017.1422414
- Pearson, J., & Thoennes, N. (1990). Custody after divorce: Demographic and attitudinal patterns. American Journal of Orthopsychiatry, 60, 233–249. doi:10.1037/h0079166
- Rebuttable Presumption Law and Legal Definition. (2017). USLegal. Retrieved from https://definitions .uslegal.com/r/rebuttable-presumption/

- Rossi, F. S., Holtzworth-Munroe, A., Applegate, A. G., Beck, C. J., Adams, J. M., & Hale, D. F. (2015). Detection of intimate partner violence and recommendation for joint family mediation: A randomized controlled trial of two screening measures. *Psychology, Public Policy, and Law, 21, 239.* doi:10.1037/law0000043
- Sandler, I. N., Wolchik, S. A., Berkel, C., Jones, S., Mauricio, A. M., Tein, J.-Y., & Winslow, E. (2016). Effectiveness trial of the New Beginnings Program (NBP) for divorcing and separating parents: Translation from and experimental prototype to an evidence-based community service. In M. Israelashvili & J. L. Romano (Eds.), *Cambridge handbook of international prevention science* (pp. 81– 106). Cambridge, UK: Cambridge University Press.
- Shadish, W. R., Clark, M. H., & Steiner, P. M. (2008). Can nonrandomized experiments yield accurate answers? A randomized experiment comparing random and nonrandom assignments. *Journal of the American Statistical Association*, 103, 1334–1344. doi:10.1198/016214508000000733
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). Experimental and quasi-experimental designs for generalized causal inference. Boston, MA: Houghton Mifflin.
- Stahl, P. M. (1999). Complex issues in child custody evaluations. New York: Sage.
- Stark, P. B. (2017). Control for a variable. In *Berkeley glossary of statistical terms*. Retrieved from https:// www.stat.berkeley.edu/~stark/SticiGui/Text/gloss.htm
- Stevenson, M. M., Braver, S. L., Ellman, I. M., & Votruba, A. M. (2012). Fathers, divorce and custody. In N. C. Cabrera & C. S. Tamis-LeMonda (Eds.), *Handbook of father involvement: Multidisciplinary* perspectives (2nd ed., pp. 379–396). New York, NY: Psychology Press.
- West, S. G., Cham, H., & Liu, Y. (2014). Causal inference and generalization in field settings: Experimental and quasi-experimental designs. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (2nd ed., pp. 49–80). New York, NY: Cambridge University Press.
- West, S. G., Cham, H., Thoemmes, F., Renneberg, B., Schulze, J., & Weiler, M. (2014). Propensity score as a basis for equating groups: Basic principles and application in clinical treatment outcome research. *Journal of Consulting & Clinical Psychology*, 82, 906–919. doi:10.1037/a0036387
- Winslow, E. B., Braver, S., Cialdini, R., Sandler, I., Betkowski, J., Tein, J. Y., . . . Lopez, M. (2017). Video-based approach to engaging parents into a preventive parenting intervention for divorcing families: Results of a randomized controlled trial. *Prevention Science*. Advance online publication.