How to carve a medical degree: comment

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Recently in this *Review*, Severin Borenstein and Paul N. Courant (1989; hereafter, B-C) took an important step in providing coherent guidance to courts who wish to treat the investment in educational degrees during a marriage as a proper subject for asset-division at divorce. B-C analyze the wife's contribution as a virtual loan with priority claim for repayment against the assets of the marriage. Such a virtual-loan model would seem to provide a clear and direct formula for the court to use: pay her back with interest. However, before the B-C concept can become a useful tool for divorce settlement, it needs refinement in both components: the interest rate to be applied and the amount to be paid back.

I. Interest Rates

B-C propose using the marginal interest rate (MIR), defined as the interest rate that would have been available in the marketplace at the time of the education, when the couple has the least borrowing power. However, to be fair to both borrower and lender, if the supporting spouse is treated as a virtual lender, the husband should be treated as a virtual borrower. At each time period, such an individual would avail himself of opportunities to refinance when loans at lower interest rates become available, which they certainly would be for an established physician compared to a beginning medical student. To mimic actual loans in this virtual-lender/virtual-borrower model, the court should use an interest rate that reflects year-by-year changes in the loan rates available to the doctor in a virtual refinancing of the original loan. As B-C point out, passbook interest rates as used in *Inman* v. *Inman*, are too low, since they are savings rates and not borrowing rates. However, because B-C ignore the opportunity for the virtual borrower to refinance, the MIR is too high.

II. Size of Loan

To determine the size of the loan outstanding at any time, the court should include consideration of the amount that is repaid year-by-year during the marriage out of enhanced income generated by the asset purchased with the borrowed money. For any educational investment that enhances income, the virtual loan is at least partially and perhaps entirely paid back during the marriage. During the period of his doctorship, she enjoys a share of a higher income; that increase is part of her return to her virtual loan. There is a net repayment in any period in which her share of the enhanced income is greater than the interest on her loan.

The required repayment at time of divorce is

$$(1) \qquad R_d = \sum_{t=1}^{d} (L_t - E_t) \prod_{j=t}^{d} (1 + i_j)$$

where R_d = required repayment at divorce time d, L_t = loan at time t, E_t = spouse's share[1] of enhanced income at time t, and i_j = interest rate available to student spouse at time j. If $R_d < 0$, then there is no required repayment at divorce; the supporting spouse has been fully paid back and has enjoyed a surplus.

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[1]The size of E_t depends on the rule adopted by the court. If the court counts as a sacrifice the student spouse's forgone income while in medical school, E_t may be negative during the investment period.

A simple application of this formulation is the revised calculation of B-C's numerical example, contained in their conclusion. There they analyze a rendition of the prototypical case of the wife supporting the husband in medical school only to be divorced later on. The example they use is the doctor whose wife contributes $10,000 each year for years 1–4. They get a divorce in year 10. Compounding at the passbook rate of 5 percent (as in *Inman*) yields a balloon payment to her of $61,000, while using the 15-percent MIR that B-C suggest yields a balloon of $133,000. Evaluated at year 15, 11 years after medical school, the corresponding balloon payments are much larger: $77,800 and $267,500. Under our formulation we must adjust the (borrowing) interest rate downward over time and take her enhanced consumption resulting from his enhanced income—assumed to be one-half of that enhancement—into account.[2] Assuming that the doctor's income rose in steady increments from $20,000 per year in year 4 to $150,000 in year 10, and using 15 percent for year 1 and 12 percent thereafter, the wife is fully paid off during year 8. After that point, if the court chooses to use the virtual-loan concept, the educational loan should not enter into the division of assets and liabilities at divorce.

[2]The court must determine the spouse's share of enhanced income and typically adopts the default presumption of equal sharing of enhanced income, unless a prenuptial agreement provides a substitute rule. We use the default presumption here.

III. Conclusion

The Borenstein and Courant formulation for the division of human capital assets at divorce is biased against the student spouse and may also encourage strategic divorce. Relative to a rule that is neutral with respect to the divorce decision, their rule imposes disincentive to the recently married wife, because the rule grants above-market interest on her investment in the marriage and no offset for enhanced consumption. Their rule also provides an inducement to her later in the marriage, because the rule grants her a huge balloon payment. The rule has the reverse effect on the doctor: he is encouraged to divorce while recently married to avoid the accumulation of a balloon payment growing at above-market interest rates without consumption offset, and discouraged later in the marriage by the massive balloon payment: better to meet a sad end than a bankrupt one. By evaluating the virtual loan in each time period using market rates of interest and acknowledging enhanced consumption as a partial or complete repayment of virtual educational loans, the rule becomes both fairer to the student spouse and neutral with respect to the divorce decision.

REFERENCES

Borenstein, Severin and Courant, Paul N., "How to Carve a Medical Degree: Human Capital Assets in Divorce Settlements," *American Economic Review*, December 1989, *79*, 992–1009.

Inman* v. *Inman, Ky. App. 578 S.W. 2d 266, 1979.