Brown's Economic Damages Newsletter

November 2011 Volume Eight Issue 9

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FATALITY CASES: Unique aspects related to quantum awards

In this issue, we review the aspects of fatality cases that set them apart from injury cases. There are many complicated facets of fatality cases that counsel might not encounter, in part because they are much less common than injury cases. In this newsletter issue, I review various aspects of assessing damages in fatality cases and how the quantum expert can assist counsel and insurers in fatality cases.

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March 2011: "PCR Rates for Canada by income level: update 2000 estimates with 2007-08 Survey of Household Spending data – PART I", vol. 8, issue #2
August 2010: "RRSPs: Impact on after-tax loss calculations, and in fatality cases", vol. 7, issue #8
November 2010: "The Divorce Contingency: negative contingency in fatality cases – update with 2005 data", vol. 7, issue #5
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Spring/Summer 2004 (printed June 2005): C.L. Brown, "Personal Consumption Rates for Canada: Differentiated by Family Size and Income Level Using Survey of Household Spending (SHS) 2000 Data", *Journal of Forensic Economics* (XVII) 2
May 2004: "PCR rates for Canada by income level: original research using the *Survey of Household Spending* (SHS) 2000", vol. 1, issue #105
December 2004: "*Fullowka et al v. Royal Oak Ventures et al* (The 'Giant Mine' case)", vol. 1, issue #111
February 2003: "Loss of dependency awards – personal consumption rates in Canada. New research has significant impact on dependency calculations", vol. 1, issue #90

(1) Family Members: Definitions

Unlike injury cases, when the calculation is focused on the individual plaintiff, there are a number of people that need to be considered in any fatality case where dependents survive the passing of the decedent. The dependents could consist of only a surviving spouse (married or common-law); spouse and minor children; orphan(s) from a single-parent family; a dependent adult;[2] or elderly parents.[3]

- **Deceased or decedent** – person fatally injured. Income profile forms the basis for the family's loss of dependency;
- **Survivor-hypothetical** – deceased's spouse or common-law partner. Income profile based on career path *had the decedent not passed away.* May or may not be different than the actual career path followed since the death of the spouse;
- **Survivor-actual** – deceased's spouse or common-law partner. Income profile mirrors the actual job and income earned by the spouse *since* the incident. May or may not be different than the hypothetical or "but -for" career path which would have been pursued had the spouse not died;

[1] To request back issues of our newsletter, go to: www.browneconomic.com > **Research & Publications** > *Economic Damages Newsletter* > click on "Newsletter index" to view issues back to 2000, by topic. To request prior issues, click on the "Back issues" on the left-hand side menu and complete the email request.
[2] In fatality cases, a dependent adult scenario might arise when s/he is disabled and must be supported until the end of his/her lifespan. In these cases, the dependency loss would survive *past* the usual age of children's self-sufficiency (18, 21 or 23). It may be necessary in such cases to obtain expert reports on the dependent adult's life expectancy, as his/her condition could affect his/her lifespan. Brown Economic can make referrals to life expectancy experts.
[3] Dependency losses for elderly parents are most commonly encountered in "filial piety" cases, where the family's culture or ethnicity dictates persistent and accepted assistance to the parents from the children.

- **Partner, common-law spouse, or "hypothetical" partner** - the person with whom the "survivor-actual" may choose to create a new household. In some cases, the survivor has chosen an actual partner whereas in others the spouse has not cohabited nor remarried since the incident in question. Quantum experts can show the impact of a 'hypothetical' partner if there is information to suggest the survivor may re-couple;

- **Dependent children** – assumed to become self-sufficient at the age they complete high school (18) or post-secondary education (21 or 23). Dependent children can include children from a previous marriage or family to whom the decedent was paying child support.

The age at which dependent children become self-sufficient (leaving aside the question of dependent adults) can be a topic over which disagreement emerges. There are two aspects of this topic that are germane to this assumption:

(i) While we typically assume the dependent children are self-sufficient once s/he completes post-secondary education – and assuming no gaps or delays in pursuing such education – there is an abundance of research which suggest that children are living with their parents until later ages than 23. The reasons for this phenomenon include the tendency toward delayed age at marriage;[4] the propensity for young adults to return to their parents' home after initial departure;[5] lack of good-paying jobs; and the decision to upgrade education levels after the first degree. Other reasons given for delayed departure from the parental home include higher house prices that make owning a home unaffordable, and the cost of paying off student loans.

More recent research analyses the decision to be independent by comparing Canadian cohorts in different eras (using people of the same age group). Using the time use modules from the *General Social Survey* for the years 1986, 1998 and 2010, Statistics Canada found that **46%** of 20 to 24-year-olds of Canadians born from 1969 to 1978 – **"Generation X"** – were living at home with one or both parents; in comparison, **73%** of this same cohort of Canadians (20 to 24-year -olds) who were born from 1981 to 1990 – **"Generation Y"** – were still living at home. When the 25 to 29-year-old cohorts are studied, these percentages drop to 17% (for **"Generation X"** Canadians) and 30% (for "Generation Y" Canadians). *Almost one-third of **"Generation Y"** Canadians aged 25 to 29-years old were still living at home in 2010.*[6] An entirely different source – a *News Release* from **Investors Group** on January 5, 2010 – found that "six-in-ten boomer parents provide financial support averaging $3,675 per year to their adult children" and the "majority of boomer parents (52 per cent) say they expect their children to be financially self-sufficient by age 25." (Conversely, almost half of these adult children born to boomer parents will not be financially self-sufficient at age 25).

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[4] Data from Statistics Canada's *Women in Canada 5th edition A Gender-based Statistical Report* (2006) indicates that in 2002, the average age of marriage for women was 27.8 and for men it was 29.8 (Table 2.3), compared with age at first marriage of 22.1 for women and 24.4 for men in 1971. Other sources that cite delayed marriage as a reason for living at home with parents include: M. Boyd and D. Norris, "The Crowded Nest: Young Adults at Home" *Canadian Social Trends,* Spring 1999; M. Gutmann and S. Pullum-Pinon, *Three Eras of Young Adult Home Leaving in Twentieth-Century America* (University of Texas at Austin: Population Research Center), 2001; and B. Mitchell, A. Wister and E. Gee, "There's No Place Like Home: An Analysis of Young Adults' Mature Coresidency in Canada" *International Journal of Aging and Human Development* Vol. 54(1) 2002.

[5] Studies indicate that approximately one-third of young adults return home at least once after their initial departure, and about one-third of the 25 to 29-year-old age group still live at home (sources: Statistics Canada, *Profile of Canadian Families and Households: Diversification Continues,* catalogue no. 96F0030XIE2001003; M. Boyd and D. Norris, "Leaving the Nest? The Impact of Family Structure" *Canadian Social Trends,* Autumn 1995; W. Clark, "Paying off Student Loans" *Perspectives on Labour and Income* Spring 1999; and B. Mitchell, A. Wister and E. Gee, "Culture and Co-residence: An Exploration of Variation in Home-Returning among Canadian Young Adults", *Canadian Review of Sociology and Anthropology* Vol. 37(2) May 2000.

[6] K. Marshall, "Generational change in paid and unpaid work" *Canadian Social Trends.* Statistics Canada catalogue no. 11-008 (Ottawa, Ontario: Minister of Industry), July 12, 2011, Table 1, p. 16.

(ii) With respect to the calculation of dependency losses for the family, the assumption about the children's span of dependency does not affect the *amount of the total award* as much as it affects the *allocation of the total award amongst the surviving children and surviving spouse.* If a later age of self-sufficiency for the children is assumed, then this lowers the share to the surviving spouse. The spouse's lower share affects the tax gross-up, as it is based strictly on the surviving spouse's portion of the award.

The upshot of this information is two-fold: one, the assumed age of self-sufficiency for the children is not critical for the purpose of the *total* award – only for the shares to allocate to the spouse and the children, and for the amount of the tax gross-up on the survivor's award.[7] Two, assuming an age of self-sufficiency for the dependent children may obscure the finding that parents *still* provide financial support to their adult children even when they are not living at home. This element of dependency is often overlooked. If counsel gathers specific details about the family's plan to continue supporting the child(ren) after they complete post-secondary education, the quantum expert can extend the age of self-sufficiency for the children.

(2) Income Profiles for Family Members

Unlike injury cases, which originally were based on before-tax, gross income,[8] fatality calculations are based on after-tax, disposable income for all family members. The basis for this distinction can be found in the comments of Dickson J. (as he then was), in *Keizer* v. *Hanna*[9] wherein he stated that "[T]he impact of income tax should be taken into account in assessing a damage award under the *Fatal Accidents Act*" and in the words of De Grandpre J. in that same case,[10]

> It seems to me that what the widow and the child have lost in this case is the support payments made by the deceased, support payments which could only come out of funds left after deducting the cost of maintaining the husband, including the amount of tax payable on his income. I cannot see how this pecuniary loss could be evaluated on any other basis than the take-home pay, that is the net pay after deductions on many items, including income tax . . .
>
> It is quite obvious that basing an award under the *Fatal Accidents Act* on gross income would fail to take into consideration the realities of life in a modern state and would, in some cases, give to the dependants a fund greatly in excess of their financial loss. Income tax must therefore be taken into consideration . . .

(3) The Formula for Calculating Dependency Losses

The proper formula for computing dependency losses can be expressed as follows:

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[7] The one exception to this conclusion, of course, is in the case of orphans since there is no surviving parent to share in the dependency award. The orphan's age of self-sufficiency becomes a key assumption in the loss of dependency award.

[8] Legislation has now been passed in several provinces mandating that injury cases be based on the plaintiff's after-deductions income net of income taxes, EI and CPP contributions in motor vehicle cases. For a summary of the provinces in which legislation has altered the original before-tax basis of calculation, visit www.browneconomic.com > *Income Damages Calculator* > FEATURES > click "Calculations are tailored to provincial legislation" and then choose the option "Claims relating to a motor vehicle accident".

[9] *Keizer* v. *Hanna*, [1978] 2 S.C.R. 342 (S.C.C.) [no page numbers in Quicklaw].

[10] *Keizer* v. *Hanna*, [1978] 2 S.C.R. 342 (S.C.C.) [no page numbers in Quicklaw].

Dependency loss = {[1-personal consumption rate] x deceased's disposable income} - {[personal consumption rate] x survivor's-hypothetical's[11] disposable income}

If we reduce this formula using symbols, it would read:

(EQUATION #1) Dependency loss = **{([1 – PCR] x A) – ([PCR x B_1])}**

Where:

A = decedent's income (in the absence of the incident)
B_1 = survivor-hypothetical's income (in the absence of the incident)
B_2 = survivor-actual's income (now that the incident has occurred)
PCR = personal consumption rate of decedent (in the absence of the incident)

There are some experts, who are "minimalists", that substitute **B_2** for **B_1** when **B_2** > **B_1** because this substitution increases the second term of equation (1) above and thereby decreases the first term of equation (1) above. There is case law, however, that has determined it is the "survivor-hypothetical's income" that should be used in the dependency loss formula. Lutz J. in *Fullowka et al v. Royal Oak Ventures Inc. et al*[12] stated, "if the widow earns more than she likely would have earned in the "but for" scenario, these extra earnings should not go to decrease the loss, and if she earns less, it should not operate to increase the loss". Similarly, in *Lamont v. Pederson*,[13] the Court decided that to reduce a claimant's dependency award because she has a job would have the unjust effect of penalizing a claimant for obtaining employment.

(3a) Joint/Cross Dependency or Sole Dependency?

The courts appear to reflect a judicial endorsement of the joint/cross dependency approach, which considers the impact of the income of both spouses (i.e. total family household income). In cases where judges have *not* considered the survivor's income, often the courts have not been urged to consider it or it would have had a negligible impact. Gillespie and Cotton concluded for Alberta cases that:

> "Alberta authority seems clear that, with regard to the various approaches:
>
> 1. If the deceased was the sole income earner, the sole dependency approach will be taken;
>
> 2. If the spouse and the deceased are both income earners, and thus it was a dual income family, and the two wage earners pooled their income into a joint account from which they paid the bills (e.g., mortgage, car, groceries and utilities), the cross dependency approach will be taken;

[11] In the dependency loss equation, the term "**{personal consumption rate x survivor's-hypothetical's disposable income}**" represents the portion of the survivor's income that (before the death) was exclusively used for the benefit of the deceased; after the deceased's death, this part of the survivor's income is no longer consumed by the deceased, but may be 'freed up' for use by the survivor. The term thus represents, in effect, a "Death Dividend" that accrues to the survivor owing to the fact that, after the death, the deceased no longer consumes any part of the survivor's income. Note, however, that the dependency loss equation calculates the death dividend as a portion of the survivor's *hypothetical* disposable income, not as a portion of the survivor's *actual* income. That is, the death dividend, calculated in this way, represents the amount of the survivor's income that *would have been* freed up, if the survivor had continued earning the same income *after the death*. If the survivor's income is actually reduced, the actual death dividend will be less. Rather than modifying the dependency loss formula to account for reductions in survivors' incomes, however, we have calculate the survivor's loss of income separately (see topic #5 below).

[12] 2004 NWTSC 66.

[13] [1981], 2 W.W.R. 24 (Sask. C.A.).

3. If the circumstances suggest that a sole or cross dependency approach would be unfair, the court may impose a modified dependency approach, such as where there is evidence that the survivor's income is much greater than the deceased's (which would lead to an absurd result using cross dependency),[14] or there is evidence that the deceased was extraordinarily frugal or self-sacrificing,[15] and thus used most of his or her income for the family's benefit…".[16]

Gillespie and Cotton's "rules of thumb" are helpful to counsel. They also dovetail with the dependency formula shown above. We defined $\mathbf{B}_1$ as the "survivor-hypothetical's income" *in the absence of the incident*. If, as these authors suggest, the decedent was the only family member participating in the labour force (#1 above), then the term $\mathbf{B}_1$ = "survivor-hypothetical's income" reverts to $0 and falls out of the equation (1) above. The dependency loss formula therefore reverts to Equation #2 below, which shows the revision to Equation #1 in this circumstance:

(EQUATION #2) Dependency loss with sole earner = **{([1 – PCR] x A)}** ~~**= {[PCR x B_1]})**~~

Where:

A = decedent's income
$\mathbf{B}_1$ = survivor-hypothetical's income = $0 {so [PCR x $\mathbf{B}_1$]= 0}
PCR = personal consumption rate of decedent

Equation #2 above is precisely the dependency loss formula given by Equation #1 but when the decedent is the sole earner.

(3b) Personal consumption rates ("PCRs")

Personal consumption rates represent the portion of family income consumed by the decedent that is no longer needed with his or her death. The *inverse* of personal consumption rates is dependency rates.[17] The "dependency" is the proportion of family income needed by the surviving family members to maintain their standard of living once the decedent's personal consumption is subtracted. The determination of the PCR is the most important element in a fatality case after developing the after-tax income profiles for the decedent, survivor and possible new or hypothetical partner.

Gillespie and Cotton remarked, "Alberta authority seems clear that, with regard to various approaches…In general, statistical averages will be used in assessing the dependency rate, rather than actual expenditure rates".[18] This is

[14] For further discussion on dealing with households when the spouses' incomes are disparate, see C.L. Brown, *Damages: Estimating Pecuniary Loss,* loose-leaf (Toronto, ON: Canada Law Book, a Thomson Reuters business), 2011, section 7.2.e.iv.9 entitled "Outcomes when spouses' incomes are disparate."
[15] For further discussion on treatment of unusual budget items, see C.L. Brown, *Damages: Estimating Pecuniary Loss,* loose-leaf (Toronto, ON: Canada Law Book, a Thomson Reuters business), 2011, section 7.2.e.v.6 entitled "What to do with 'unusual' expenditure patterns by decedent".
[16] Gillespie, C. and Bottom Line Research, "Sole/Cross/Modified Approaches to Loss of Dependency in a Fatal Accident Claim" The Barrister Issue no. 100, June 2011, p. 14.
[17] For instance, if the PCR is 10%, this implies that the family's dependency rate is 90%. The PCR + dependency rate = 100%, where 100% represents the family's total income.
[18] Gillespie, C. and Bottom Line Research, "Sole/Cross/Modified Approaches to Loss of Dependency in a Fatal Accident Claim" The Barrister Issue no. 100, June 2011, p. 14. For more discussion on this point, see C.L. Brown, *Damages: Estimating Pecuniary Loss,* loose-leaf (Toronto, ON: Canada Law Book, a Thomson Reuters business), 2011, section 7.2.e.iv.5 entitled "Why not use family budget information instead of the *Surveys of Household Spending?".*

precisely the conclusion reached by Fraser, J. in *Millott Estate v. Reinhard,* [2001] A.J. No. 1644 (Alta. Q.B.) in which this author testified for the defendants.[19]

The economics literature, specifically on consumption and savings behaviour, has established in no uncertain terms that families' spending is dictated by available resources, i.e.: money income.[20] Thus, it is not surprising to find that when we try to account for the portion of family income[21] that the decedent consumed – and is now 'saved' – it fluctuates according to how much income the family had prior to the decedent's passing. This is not a novel concept; it has been recognized since John Maynard Keynes, a famous economist, commented that:

> "The fundamental psychological law, upon which we are entitled to depend with great confidence both a priori from our knowledge of human nature and from the detailed facts of experience, is that men are disposed, as a rule and on average, to increase their consumption as their income increases, *but not by as much as the increase in their income."* (emphasis added)[22]

The last part of Keynes' quote means that **as a percentage, consumption will fall as income rises.** This has been confirmed in economic studies of consumption and income. Similarly, two forensic economists in the US commented that one of the 'stylized facts' about consumption is:

> "…if a spending unit receives an additional dollar of income, *it will increase its level of consumption spending, but by less than an additional dollar* and at least with regard to budget studies, average consumption (consumption divided by income) tends to fall as income rises." (emphasis added)[23]

Statistics Canada remarked in *Spending Patterns in Canada 2000:*

> Household spending patterns are strongly influenced by available income. In 2000, households in the lowest quintile spent an average of $18,909 while households in the top quintile spent $113,027. Households in the lowest quintile spent slightly less than half of their budgets on food and shelter ($8,836). In contrast, households in the top quintile spent $26,758 on these two necessities, representing one quarter of their budgets. Households in the top income quintile devoted 30% of their budgets to personal taxes, compared to only 3% for households in the lowest quintile.[24]

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[19] In *Millott,* when our report was prepared in 2000 (and testimony was heard in 2000), counsel requested that both approaches be undertaken. As a result, PCRs were calculated by using the Millott family's expenditures prior to Mr. Millott's death; and using Statistics Canada's *Family Expenditure Survey* 1996 (the most recent data at that time). Not only were the PCRs within 1 to 2% of each other in both methods, it became clear when analyzing the Millott family's budget that many expenditures were unaccounted for due to cash expenditures. Also, the Millott family's budget was based primarily on their circumstances at the time of Mr. Millott's death, which included near poverty-level income while Mr. Millott attended school and subsequently secured low-level employment as a night clerk at a hotel. Clearly, these circumstances would have changed as the Millotts aged and as Mr. Millott earned a higher income, so the PCRs based on expenditure patterns before 2000 were not representative of the majority of the family's spending as their household income increased.

[20] This literature will not be repeated in this section. For a summary of the literature, see C.L. Brown, "Personal Consumption Rates for Canada: Differentiated by Family Size and Income Level Using Survey of Household Spending (SHS) 2000 Data", *Journal of Forensic Economics* (XVII) 2, Spring/Summer 2004, section **II. Review of the Literature,** pp. 149-151.

[21] The reader will note the use of the term "family income" instead of only the decedent's income. This is due to the fact that Canadian courts, for the most part, have accepted that *both* spouses' income is relevant in the calculation of dependency losses. For a brief review, see **Brown Economic's Damages Newsletter** (formerly *The Economics Editor*), "Fatality Methodologies and PCR Rates for Canada by Income Level: Article published in the *Journal of Forensic Economics*" February 2006, vol. 3, no. 2, section entitled: **'Joint' or 'cross' dependency method typically adopted by courts.**

[22] Keynes, John Maynard, *The General Theory of Employment, Interest and Money* (Cambridge, Massachusetts: Harcourt Brace and Company), 1935.

[23] Trout, Robert R. and Carroll B. Foster, "Estimating a Decedent's Consumption in Wrongful Death Cases" *Journal of Forensic Economics* 1993 6(2), p. 136.

[24] Statistics Canada, *Spending Patterns in Canada 2000* (Ottawa: Statistics Canada, July 2002) Catalogue No. 62-202-XIE, p. 15.

The spending patterns vary because:

- Adults consume more than teenagers, and teenagers consume more than children (with the exception of daycare costs that can double the cost of raising young children not yet attending school), reflecting the changing nature of expenditure in households through the life cycle of consumption
- Adults who have children display 'substitution effects' in their purchasing patterns compared to adults without children, for instance deferring expenditures on travel or vacation in lieu of saving for their children's post-secondary education; this will be influenced by the overall household income level
- Lower income families buy more 'inferior' goods than high-income families due to the "luxury" effect. 'Inferior' goods are ones that people buy less of when their income rises
- Income has important influence on spending habits: as a household acquires more income, it expends more on consumption, but it also begins to defer consumption and saves income; the more income the household has, the more it spends on housing[25]
- High-income households, on average, spend more than other households and they allocate expenditures differently. Households with annual incomes in excess of $90,000 allocate larger shares to food away from home, housing operations, supplies and furnishings, personal insurance and pensions, cash contributions, entertainment and apparel and services. Households with lower incomes allocate larger shares to food at home, shelter and utilities, transportation and health care.[26]
- Intra-allocation of households imply that higher-income spouses share their allocation of income: in a two-person poor household, where the wife's share of income is only 25% of total household income, she receives 42% of total expenditure; in a wealthy household where the wife earns 75% of income she has a 58% share in expenditures[27]
- Two studies from the US and Canada show that expenditures on food, housing, transportation decline as income rises by depicting expenditures on these items by income quintile group[28]

For graphs depicting expenditure as a percentage of income[29] from the 2007-08 *Surveys of Household Spending,* see Appendix A (p. 14) of **Brown's Economic Damages Newsletter,** "PCR Rates for Canada by income level: update 2000 estimates with 2007-08 *Survey of Household Spending* data – PART I," March 2011, Vol. 8, issue #2.

As an example of what the graphs in Appendix A of the March 2011 newsletter show, when we look at *Survey of Household Spending* ("SHS") data from 2007,[30] we see that **households with income of $20,000 to $39,999** spend $4,656 on **food, equal to 15%** of total expenditure. When we compare **households with an income above $100,000,** they spend $9,400 on **food, equal to 7%** of their total expenditure. So we see that the higher-income household spends *more* on food in **dollar terms** ($9,400 versus $4,656) but *less* as a **percentage of total income** (7% versus 15%). This finding is what is referred to as the "average propensity to consume" out of income ("APC") and what Statistics

[25] Moehrle, Thomas, *Expenditure patterns of the elderly: workers and non-workers*, Monthly Labor Review, May 1990.
[26] U.S. Dept. of Labour Bureau and Labor Statistics, *Spending Patterns of High-Income Households*, November 1998, summary 98-10.
[27] Martin Browning, Francois Bourguignon, Pierre-Andre Chiappori and Valerie Lechene, *Income and Outcomes: A Structural Model of Intrahousehold Allocation*, Journal of Political Economy, 1994, vol. 102, no. 61, at 1088-1090.
[28] Sources: U.S. Department of Labor Bureau of Labor Statistics, *Consumer Expenditures in 2001*, April 2003, report 966 and Statistics Canada *Spending Patterns in Canada 2000* catalogue no. 62-202.
[29] The graphs in Appendix A of the March 2011 newsletter depict various expenditure categories as a percentage of before-tax income, such as food, shelter and transportation; clothing, health, and recreation; personal care, education and tobacco and alcohol; and pension savings. The levels of before-tax income range from $10,000 to $14,999 to $200,000+.
[30] Based on analysis of data from the Public-use Microdata File ("PUMF") for the 2007 *Survey of Household Spending*, purchased from Statistics Canada. These comparisons are for households in Canada without children.

Canada uses to construct their low-income cutoffs: they locate these households as ones in which 63% of after-tax household income is spent on food, shelter and clothing. Since the *average* household spends 43% on these three expenditure categories, Statistics Canada has deemed households who spend 20% more than 43% on food, shelter and clothing to be in 'straitened circumstances', in other words, in "low-income".[31] So we see that one of the most commonly used measures of household welfare by Statistics Canada is based on the notion that households spend *proportionately* less (as a percentage) on these three expenditure categories (food, shelter and clothing) as their income rises. Statistics Canada's use of a declining "average propensity to consume" ('APC') is in concert with the economics literature on this topic.

Since we are describing the portion of the family income that the decedent consumed but is no longer needed, *and* that the surviving family members require the same standard of living they enjoyed before the decedent's passing[32] (a legal concept),[33] we know that this portion of family income is **variable.** It represents money the decedent consumed while s/he was alive and that the family no longer requires to maintain their standard of living: so it can only be for **variable** expenses that fluctuated directly with the decedent's presence and are no longer needed in his/her absence. Immediately, we can see that described thusly, this **variable** portion that we have to subtract in the form of the PCR *cannot* include fixed expenses, because these would not vary with the decedent's passing; or, even if they varied, the family still needs the entire expenditure for the fixed item *despite* the decedent's passing. For instance, the surviving family requires the pre-incident dwelling they resided in, and even though we could attribute a share to the decedent (to reflect his/her usage of it), we cannot reduce the shelter expenses for this share because it would violate the legal concept of maintaining the family's standard of living. This concept underlies many of the decisions undertaken to derive PCR rates in fatality cases in civil litigation.

Constructing PCRs by family size *and* family income level is a refinement that was long overdue, since prior to that time, when quantum experts calculated them,[34] Canadian dependency awards were based on PCRs that only fluctuated by family size.[35] To view the PCRs we have derived from Statistics Canada's *Surveys of Household Spending* for the years 2007 and 2008 (the most recent data available), see C.L. Brown, **Damages: Estimating Pecuniary Loss,** loose-leaf (Toronto, ON: Canada Law Book, a Thomson Reuters business), 2011, section 7.2.e.v (Tables 7-4 and 7-5).[36]

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[31] Statistics Canada, *Low income cut-offs for 2008 and low income measures for 2007* (Ottawa, Ontario: Minister of Industry), 2009. Catalogue no. 75F0002M, no. 002, p. 7.

[32] This is a key condition when attempting to establish PCRs in fatality cases, because without it the PCR could be computed differently. For example, if we wanted to know how much the decedent consumed of all expenses, regardless of maintaining the family's standard of living, we could attribute shares of the fixed and durable expenses to the decedent, depending on his/her use of them. This would be akin to a "*Duncan*-type" estate calculation, where the Court of Appeal of Alberta defined (in this author's opinion) the estate's available surplus (i.e., the award to be calculated) to possibly exist within *each* expenditure category, rather than only the variable expenses associated with the presence of the decedent while alive. In other words, a "*Duncan*-type" estate calculation *does* attribute some share of the shelter expenditure category to the decedent (assuming s/he lived above the low-income threshold) because accounting for "necessary" or "basic" expenses does not require a larger abode in an expensive neighbourhood – it merely requires, say, a 1-bedroom apartment. The "*Duncan*-type" estate calculation would deem shelter expenses over and above say, a 1-bedroom apartment, to be part of the available surplus, and thus part of the award. In essence, this involved attributing part of a fixed expense (shelter) to the decedent, something that is not done in fatality cases, where the family's standard of living must be maintained at its pre-incident level. (For construction of the "lost years'" deduction to determine available surplus in *Duncan* cases, see C.L. Brown, "Duncan v. Baddeley: A Case Comment", *Alberta Law Review* 1999, 37(3), 772-822).

[33] As per *Keizer v. Hanna and Buch* (1978), 82 D.L.R. (3d) 449, [1978] S.C.R. 342, p. 352.

[34] Notably, Canadian judges have commented on the importance of family income level for the dependency award, and have made adjustments to the PCRs, the dependency rate, or the total award for this factor. See, for instance, *Johnson v. Carter* 2007 BCSC 622 in which Justice Slade adopted a 10% PCR for the recognition that the decedent was a high-income earner. (para. [160]) Mr. Johnson earned $1,250,000 per annum, as found by the judge. Note that in the *Survey of Household Spending* ("SHS") data, from 2007 and 2008, the highest before-tax income level reported for Canadian households is "greater than $200,000".

[35] See, for instance, Table 3 in C.L. Brown, "Wrongful Death Claims: Dependency Loss Calculations" 22(1) *Advocates Quarterly* 1999, p. 16. In Table 3, this author shows a summary of PCR rates by family size from six different sources as of the year 1999 (four of which were from the U.S.). These PCRs were calculated across *all* income levels, and only varied by family size.

[36] The same tables are also reproduced in **Brown's Economic Damages Newsletter,** "PCR rates for Canada by income level: update 2000 estimates with 2007-08 *Survey of Household Spending* data – PART II", April 2011, vol. 8, issue #3, Table B (p. 3) and Table C (p. 8).

(4) Valuable Services (loss of dependency on housekeeping capacity)

In almost every fatality case, there is an accompanying award for the parent's loss of housekeeping capacity and parental role. For a quantum expert, the key components are as follows:

1) Evidence regarding the decedent's pre-incident weekly hours spent on housework and childcare;
2) Replacement rate to attach to the decedent's time as determined in (1);
3) A negative "health" contingency;
4) A negative "joint mortality"[37] contingency; and
5) A real discount rate assumption to calculate the future loss of dependency on housekeeping capacity.

Once these components are identified, the quantum expert can assess the past and future valuable services, adding pre-judgment interest to the past losses and discounting to present value the future losses. Unlike income loss estimates that usually cease at retirement age, dependency on valuable services extends to the decedent's 80th birthday, because retired persons spend as much if not more hours on unpaid work than employed persons.

(4a) The decedent's housekeeping capacity: *Diary of Household Activities*

With respect to evidence about housekeeping hours, a quantum expert's assessment begins with evidence about the decedent (usually from the spouse or other family member) and compares this evidence to statistical averages, matching the decedent's demographic characteristics in terms of gender, age, employment status, marital status, and presence or absence of children. Special tabulations are available from Statistics Canada using their *General Social Surveys.* The most recent one done by Statistics Canada was for the 2010 year.[38]

Brown Economic has created a *Diary of Household Activities* ™ that has been used for many years and which went through several iterations with the help of feedback from counsel and the courts. This form was designed while keeping in mind the biases that can result from, say, asking an open-ended question such as "How many hours do you spend on housekeeping per week?" Such an open-ended question invariably leads to an overstatement of such hours because the respondent is not constrained to a 168-hour week.

The usefulness of a form like the *Diary of Household Activities* ™ is that it achieves what the courts dictate: a link between the family's evidence as to the decedent's household activities and the statistics published as to the 'average' hours performed by Canadians. It also asks the family to allocate his/her time to other activities (paid work, sleeping, personal care, leisure), not just housework, and constrains all activities to a 168-hour week.

For more information on time use trends (from Statistics Canada's 2010 *General Social Survey),* see **Brown's Economic Damages Newsletter,** "Housekeeping Claims: Time Use Data from Statistics Canada's 2010 *General Social Survey* (GSS) cycle 24," July/August 2011, Vol. 8, issue #6.

[37] The mortality contingency is a joint one, represented by multiplying the decedent's and survivor's mortality (based on gender and age) because we assume the decedent's housekeeping capacity would no longer have been needed if either the decedent or spouse had passed away in any event. This differs from a housekeeping award in an injury case, which only incorporates the plaintiff's mortality.

[38] The Census also asks questions about housekeeping hours but typically only asks the respondent to identify the *range of hours* done each week (rather than the specific number of hours per week), i.e., 5 to 10 hours, 10 to 20 hours, etc.

To access our *Diary of Household Activities* ™ (fatal) online, please visit www.browneconomic.com > **Products & Services** menu > "Checklists & Diaries" > Diaries.

To access our *Housekeeping Damages Calculator* ™ (HDC), visit www.browneconomic.com > **Economic Loss Calculators** > "Housekeeping (pay per use)".

(4b) The decedent's housekeeping capacity: *Cost of Care Expert Valuation*

One of the more common strategies counsel employ in fatality cases is to commission a report from a cost of care expert on the parent's care giving role in the family. In many cases, this information is superior to filling out a form, because the occupational therapist visits the family in their home and as a result often compiles information about the parent's role that was not communicated in the *Diary.* Unlike injury cases, the decedent fulfilled a care-giving role as a parent that goes far beyond simple housekeeping tasks.

The report prepared by the cost of care expert is similar to valuations done in injury cases for seriously injured plaintiffs who require goods and services to treat their ailments. In fatality cases, the parent's role may only be adequately replaced with tutoring and mentoring help along with managing the household.

Contact Brown Economic for referrals to cost of care experts in your region: 1-888-BEC-ASST {1-888-232-2778}.

(5) Survivor's Potential Loss of Income

The reader may recall the definitions of family members that are contained in section (1) above. While the dependency formula (see Equations #1 and #2 above) uses the "survivor-hypothetical" income, the survivor's potential loss of income – in addition to the family's dependency loss – results from a comparison of the "survivor-hypothetical" income and the "survivor-actual" income profiles. We repeat the definitions of these income profiles below:

- **Survivor-hypothetical** – deceased's spouse or common-law partner. Income profile based on career path *had the decedent not passed away.* May or may not be different than the actual career path followed since the death of the spouse;
- **Survivor-actual** – deceased's spouse or common-law partner. Income profile mirrors the actual job and income earned by the spouse *since* the incident.

We have encountered numerous fact situations where the death of a spouse causes the surviving parent to alter or curtail his/her "labour force participation": in other words, the amount of time the spouse spends working in the labour market. One of the more common examples of such occurrences pertains to the care of the minor children. Once the survivor becomes a single parent, s/he devotes more time to parenting than s/he did prior to the incident to mirror the time previously spent by *both* parents with the minor children.

We have also encountered families where the surviving spouse is grief-stricken to the point of being unable to work in the labour market. In these cases, counsel usually obtains a psychological or psychiatrist's expert opinion that it is the

decedent's passing which has caused the alteration in the survivor's career path.

There are four cases known to this author where the courts have considered and/or awarded the survivor a "loss of income" award separate and apart from the loss of dependency award on the decedent's income. These cases are: *Macartney v. Warner* (2000); *Ruiz (Guardian ad Litem of) v. Bouaziz (*2000);[39] *Dybongco-Rimando Estate v. Lee* (2001); and *Millott (Estate) v. Reinhard* (2002).

There are also cases where the decedent's passing results in, or simply precedes, a decision by the survivor to upgrade his/her educational attainment and ultimately earn a higher income than the survivor demonstrated prior to the decedent's passing. In such cases, it is paramount to first understand what, if anything, the survivor's decision to change careers is linked to the death of the spouse. If the decision is one that would have occurred anyway, and simply coincides with the death of the spouse, then the "survivor-hypothetical" income profile collapses to the same profile as the "survivor-actual" profile, except for the *timing* of the change in career. On the other hand, if the survivor wishes to upgrade his/her earning potential *because* s/he is the sole surviving parent and must provide for the children of the marriage alone, it is our understanding that any excess which occurs when (or if) the "survivor-actual" income profile *exceeds* the "survivor-hypothetical" income profile is <u>not</u> to be offset against the survivor's dependency loss. This principle is in concert with the notion that the defendant should not receive a benefit from the tortious act.

Ultimately, whether a survivor's loss of income must be calculated depends strictly on the facts underlying the "survivor-hypothetical" income profile and the "survivor-actual" income profile. Often, a loss of income award arising from a difference in these two income profiles is time-limited.

(6) Tax Gross-up

Like the valuable services award, in almost every fatality case there is an accompanying award for a tax gross-up to offset the tax payable on the interest income arising from the dependency awards (on income *and* valuable services), which are based on the decedent's and survivor's after-tax income profiles. This is a well-established head of damage in fatality cases, because the prospective award will be eroded if there is interest income that accrues on the declining balance of the award and it is taxed. Normally, the claimant would not have to declare such interest income in the absence of receiving an award, so the tax on this interest income is an "extra" tax burden that arises specifically because of the prospective award.[40]

As noted in section (1) above, the tax gross-up is calculated on the basis of the surviving parent's award only, not on the total award for the family, because children under the age of 21 are not taxed on investment income from an award as per section 81(1)(*g.*1) of the *Income Tax Act.* This provision has been endorsed in various cases known to this author (*LeBlanc v. Burcevski* (1995), *Taguchi v. Stuparyk* (1994), *Jensen v. Guardian Insurance Co. of Canada* (1997), and *Dewhurst Estate v. Schmidtke* (1995) to name a few).

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[39] The fact situation in this case differed from the others. In *Ruiz*, the two orphans sued for a prospective loss of income arising from their inability to remain in and be educated in Canada after their mother died.

[40] This concept was realized in *Watkins v. Olafson*, 1989 CanLII 36 (S.C.C.), [1989] 2 S.C.R. 750, as noted by Finch C.J.B.C. reiterated in *Townsend v. Kroppmanns:* "…the case law acknowledged the need to increase the lump sum award by an amount sufficient to pay income tax on the fund's income and to leave intact a fund sufficient to pay for the future costs as they were incurred." (para [34]).

For a quantum expert calculating a tax gross-up on the widow(er)'s awards for loss of dependency on income and valuable services, the key assumptions to be made are as follows:

- The amount of the lump sum award(s);[41]
- The tax brackets and credits published in the most recent federal government and provincial budgets;
- The age and life expectancy of the decedent and survivor;
- The real discount rate used to calculate the prospective award and the tax gross-up;
- The future rate of inflation;[42]
- The rate of growth of non-refundable tax credits (i.e., CPP and EI contributions);[43]
- The **"survivor-hypothetical's"** tax bracket in the absence of the award (specifically, the survivor's other sources of income[44] and the survivor's non-refundable tax credits);
- The **"survivor-actual's"** deductions from income;[45]
- The **"survivor-actual's"** income profile and tax bracket once the award(s) are included.[46]

There is one caveat to note with respect to the real discount rate to be used: not only does it have to be the *same* rate as used in the other present value calculations, courts have mandated that the investment strategy should be a safe one, in interest-bearing only instruments, not in a "mixed portfolio" that requires the widow(er) to invest in equities. Justice Read, in *Palmquist v. Ziegler* (2010), commented on this aspect of tax gross-up calculations:

> [265]**I accept Ms. Brown's evidence respecting the real discount rate and therefore conclude that 2.17% should be used for the first five years with 3% being used after that.** I do so because of the present low interest regime and bearing in mind that the danger of using the higher rate proposed by [the other expert], particularly in the short term will be to under-compensate the Palmquist family, since Mrs. Palmquist will have to draw down amounts to live on that will decrease the amount remaining for the future. There is a real risk that Mrs. Palmquist and her children will run out of money if I estimate the interest rate too high. Finally, **I have chosen Ms. Brown's methodology because I agree with her rationale that Mrs. Palmquist should not have to incur the risk of investing in the stock market or in other higher interest vehicles in order to try to maximize the return.** (emphasis added)[47]

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[41] The amounts for the awards to be "grossed up" (i.e., dependency on loss of income and valuable services awards) have to dovetail exactly with the tax gross-up calculations. This typically prevents two experts (i.e., an economist and accountant) from doing the tax gross-up calculation, as the expert doing the tax gross-up award would have to replicate the dependency awards already done by the initial expert on the file. Most quantum experts, whether they are economists, actuaries or accountants, are able to do the tax gross-up calculation and are accepted in court as qualified to do so. Thus it is not necessary to hire a tax accountant when the forensic economist or actuary has done the initial lump sum calculations.

[42] We forecast these rates according to P. Dungan and S. Murphy, *Long Term Outlook for the Canadian Economy National Projection through 2040 Policy and Economic Analysis Program*, PEAP Policy Study 2011-01 University of Toronto, Table 1b.

[43] We forecast these rates according to P. Dungan and S. Murphy, *Long Term Outlook for the Canadian Economy National Projection through 2040 Policy and Economic Analysis Program*, PEAP Policy Study 2011-01 University of Toronto, Table 3. Many quantum experts ignore this aspect of forecasting tax brackets and rates, but we know the EI contribution rate often changes each year. The CPP contribution rate has remained at 4.95% since 2003, although discussions about increasing this contribution rate have arisen in 2010.

[44] These sources of income can include non-employment sources, such as royalties, interest income, rental income and capital gains income, as well as retirement income (CPP and OAS benefits, RRSP withdrawals, private pension income). For data on average and maximum CPP/OAS benefits, see Human Resources Development Canada's *Statistical Bulletin* on the Canada Pension Plan and Old Age Security benefits received by Canadian seniors, by age and gender, February 2011, and *Old Age Security (OAS) Payment Rates* for October to December 2011 (see www.servicecanada.gc.ca).

[45] Such deductions could include union dues; employment expenses; carrying charges; and RRSP/RPP contributions. For statistics on the propensity to contribute to RRSPs and the rate of RRSP contributions, see **Brown's Economic Damages Newsletter,** "RRSPs: Impact on after-tax loss calculations, and in fatality cases" August 2010, vol. 7, issue #8.

[46] These awards will include not only the loss of dependency awards, but also the tax gross-up award itself, which will generate interest income. Comprehensive tax gross-up programs will consider several iterations of the tax gross-up calculation in order to capture the extra tax associated with the interest income accruing on the lump sum tax gross-up award.

[47] *Palmquist v. Ziegler* [2010] ABQB 337, decision released June 7, 2010. This author testified on behalf of the plaintiffs in this action.

A final caveat needs to be mentioned. Often, counsel observe in reports that include tax gross-up awards that a numerical percentage is shown along with the tax gross-up award expressed in dollar terms. The numerical percentage is shown as a convenience for counsel (and the court) to apply in future negotiations if the base awards change. It is important to know, however, that the numerical percentage is derived *after* the dollar awards are calculated – in other words, there is no "schedule" of percentages that can be used to generate a tax gross-up award: the percentage is derived *after* the dollar award is calculated. As Cooper-Stephenson comments:

> The need for an evidential base on which to ground the computation of a tax gross-up is clear. **The calculations are too complex and various for a simple range of percentages to be used** [See, e.g., *Watkins v. Olafson* (1986), 40 C.C.L.T. 229 at 234-35 (Man. C.A.)] (emphasis added)[48]

(7) Remarriage & Divorce Probabilities

These contingencies refer to either the probability that the original couple might have divorced, had the decedent not died in the incident in question; or, that the survivor might now remarry given the decedent has passed on. It is important to remember that one of these contingencies **(divorce)** pertains to the "but-for" scenario: that is, *what would have happened to the marriage if the incident had not occurred.* The other contingency **(remarriage)** pertains to the fact situation *now that the incident has occurred and the decedent has passed on.*

In all fatality cases, it is incumbent upon the quantum expert to present loss of dependency awards (on income and valuable services) *without* remarriage and divorce contingencies; and then *with* remarriage and divorce contingencies (separately and together). The reason for this is that the courts (or parties to the negotiations) determine whether or not these contingencies should be applied, given the facts at hand – not the quantum expert.

Decisions by the quantum expert to either exclude any presentation of these contingencies – or *only* include these contingencies, i.e., *neglect* to show awards <u>without</u> these probabilities – shows a bias to the expert's report that is unnecessary. The quantum expert's role is to provide the courts and the parties to the litigation the information with which to assess the ultimate damage awards.

It is also important to remember that although contingencies for remarriage and divorce are available, they are <u>only</u> applicable by gender, age and marital status (the latter in the case of remarriage). In other words, there are <u>no</u> statistics for remarriage or divorce that take into account qualitative factors, such as the presence of minor children, appearance, differing religions, pre-marital birth, or wealth of a possible suitor.[49] However, the applicability of these statistics by age *can* act as a proxy for the length of the marriage. For instance, statistics plainly show that the longer a couple remains married, the less likely they are to divorce, as time elapses.

(7a) <u>Remarriage contingency</u>

The main aspect of the remarriage contingency is to **<u>ensure your quantum expert has applied probabilities that are based on widow(ers) only</u>** – and that they exclude divorcees. The reason for this is obvious: widowers are far less likely

[48] K. Cooper-Stephenson, *Personal Injury Damages in Canada* (Toronto: Carswell), 1996, p. 462.
[49] There *are* studies that have attempted to assess the impact of various factors on the probability of divorce and remarriage. These studies, however, do not permit the quantum expert to convert these findings into age- and gender-specific conditional probabilities that are needed for damage assessments.

to eventually remarry than are divorcees; and when they do, they take much longer than divorced persons, so a period of dependency in a fatality case still exists prior to any remarriage date.

Statistics Canada does *not* release remarriage rates that are for widow(ers) only as a standard practice. The published rates combine both widow(ers) and divorcees. Experts who use the published rates will OVERSTATE the propensity and timing of remarriage, and as a result will UNDERSTATE the fatality awards. The quantum expert must obtain a custom tabulation from Statistics Canada in order to incorporate remarriage rates for widow(ers) only. To our knowledge, Brown Economic may be the only group of experts in Canada who have purchased such a custom tabulation.

Of course, the remarriage rates must be applied separately for women and men, since the propensity to remarry differs for women than for men: women are less likely to remarry once widowed, and when they do, take longer to remarry than men. Remarriage rates are also, as we would expect, lower for older people than for younger people; so this contingency will have a large impact in cases where the decedent and survivor were young (i.e., in their 20s or 30s) but will have a much smaller impact in cases where the decedent and survivor are older (mid- to late-40s and above).

There is another aspect to the remarriage contingency that has emerged in the past 10 years of assessing damages in fatality cases. This is addressed in section (8) below.

(7b) Divorce contingency

The most important aspect of integrating a divorce contingency in fatality cases depends on the *nature of the couple's union prior to the incident.* In cases where the spouses in question were legally married, Statistics Canada publishes divorce rates by gender, age and province[50] that are readily available. The most recent divorce rates are from 2005 and are available for each province and territory: Statistics Canada's **Tables 101-6504 and 101-6505,** *Age-specific divorce rates per 1,000 legally married females and males, Canada, provinces and territories, annual (rate per 1,000 legally married females or males),* CANSIM (database).[51] Note that divorce rates by number of previous marriages are not routinely published.

The divorce rate depends significantly on the duration of marriage. Statistics demonstrate vividly that divorce rates rise steeply during the first few years of marriage (1 to 9 years), then drop off to less than 5% for couples who have been together for 30-34 years.[52] These are overall divorce rates, however. The actual annual rate of divorce hovers around 1 to 2% per year. It is the *cumulative* nature of this contingency that decreases dependency and housekeeping estimates in fatality cases by 10 to 20% overall.[53]

[50] This is important, as the national average obscures some important differences between provinces and territories in Canada. For instance, although the total divorce rate (by the 30th year of marriage) was 38.3% in 2003 – meaning that for every 100 divorces, 38 of them end in divorce by the 30th year of marriage – this obscures the fact that the overall divorce rate is much lower in Newfoundland and Labrador (17.1%) and much higher in Quebec (49.7%). The "average" rate of roughly 40% (40 out of 100 marriages) describes couples in Ontario (37.0%), British Columbia (39.8%), Alberta and the Yukon (40.0%). Lower-than-average divorce rates are prevalent in the remaining provinces and territories (27 to 30%). (Source: Statistics Canada, "Divorces 2003" *The Daily* released March 9, 2005).

[51] The 2005 age- and gender-specific divorce rates are available free of charge from Statistics Canada.

[52] See Figure 1 in **Brown's Economic Damages Newsletter** (formerly **The Economics Editor**), "Divorce rates in fatality cases" April 2006, vol. 3, issue #4.

[53] It is important to note that the total impact of the divorce contingency *cannot* be reported until the annual calculations are undertaken. This contingency cannot be estimated until these calculations are performed, and they depend heavily on the ages of the couple at the time of the incident. Younger couples are more prone to divorce than older couples, so the cumulative contingency will be considerably larger for younger couples than older ones.

If the couple in question had been common-law partners rather than legal spouses, it is more appropriate to use rates of common-law dissolution ("CLU" rates) than divorce rates. This is due to the fact that the rate of CLU dissolution is considerably higher than the rate of divorce, at least for younger couples.[54] To our knowledge, Brown Economic may be the only group of experts in Canada who have purchased a custom tabulation that provides CLU rates by gender and age. We utilize the CLU rates in cases where the couple had been living common-law rather than married.

The final caveat with respect to the divorce contingency is to consider the notion that *if* the original couple in question had divorced in the absence of the incident, there might well have been ongoing monetary support obligations after the divorce or CLU dissolution, either in terms of a time-limited spousal support order or a matrimonial property transfer.[55] This is especially true if the decedent was the main "breadwinner" whose income was much higher than the survivor's income. In all cases, when we apply the divorce contingency, we downgrade the impact of the contingency by calculating annual support payments to the survivor, which are time-limited and contingent upon divorce occurring. (The spousal support payments that are calculated are assumed to be a proxy of either an annual allowance, or a matrimonial property transfer). This adjustment to the divorce contingency has been accepted in two cases that this author has testified: in *Fullowka et al v. Royal Oak Ventures et al* (2004); and in *Palmquist v. Ziegler* (2010).[56]

(8) New "Partner" in the Household (affects remarriage contingency)

As noted above, an issue surrounding the implementation of the remarriage probabilities is the consideration of the new or hypothetical partner. Counsel are beginning to realize that the emergence of a new cohabiting or common-law spouse, or remarriage, does not necessarily cease the survivor's dependency losses on either income or valuable services: it depends on a year-by-year comparison of the decedent and the new or hypothetical partner.

Formerly, it was taken as "given" that once remarriage (or cohabitation) occurred, the survivor's dependency losses automatically ceased. With the advent of new technological advances in our fatality software, Brown Economic is able to compare, on a year-by-year basis, the decedent's after-tax income with the partner's after-tax income;[57] and, as well, the decedent's contribution to valuable services with the partner's provision of valuable services.[58] Often, we have found that this explicit comparison leads to an ongoing loss of dependency on either income or valuable services, or both, by the survivor. It *does* require more information, since we now have to know the date of cohabitation (or remarriage); and we need demographic information about the new partner, i.e., his/her date of birth, resume, tax returns, etc.

[54] For additional commentary on divorce rates vis-à-vis CLU rates, see **Brown's Economic Damages Newsletter,** "The Divorce Contingency: negative contingency in fatality cases – update with 2005 data" May 2010, vol. 7, issue #5.
[55] This adjustment to the divorce contingency only applies to the loss of dependency award on income, not valuable services. Since a marital disruption presumes different residences, there is no 'scaling back' of the divorce contingency in the valuable services award, as we assume divorce would limit the non-custodial parent's provision of such services (except for parenting and mentoring).
[56] Spousal support (or transfer of matrimonial property) is calculated using this formula: {([decedent's after-tax income + survivor's after-tax income] / 2) – [survivor's after-tax income]}. This adjustment to the divorce contingency was accepted in *Palmquist v. Ziegler* 2010 ABQB 337, paras. [239] and [243].
[57] Moreover, we can conduct this comparison even if the decedent and survivor lived in a different province or territory than the survivor and new partner, since we have tax tables for all provinces and territories in Canada.
[58] The comparison of valuable services is accomplished by having the survivor complete a *Diary of Household Activities* (fatal) for both the decedent, and the new partner. Alternatively, the cost of care expert could inquire and observe the new partner's contribution to the household and make a comparison to the decedent's prior role in the household.

A further "wrinkle" can occur if the new partner has had children with a former spouse, and the new child(ren) move into the household with the survivor; or, if the survivor and partner together have a child after the incident. Mainly, this affects the comparative analysis between the decedent and the new partner/cohabiter since each person's PCR will differ depending on the number of dependents each supports. In other words, when we compare the decedent's contribution to the household to the partner's contribution to the household, each of their personal consumption will be affected by the existence of dependents, because PCRs have an inverse relationship to family size. To put this another way, if the partner has fiscal responsibilities to former children – or a new child – this leaves less income that the partner can contribute to the household with the survivor. This can affect the survivor's ongoing dependency loss, since the decedent would not have had the same number of dependents as the new partner.

A final consideration may be one in which counsel or the insurer wish to determine the impact of a "hypothetical" partner for the survivor. This may occur if the survivor has re-coupled with different persons following the incident; or if a new relationship has demonstrated an "on-again, off-again" tendency; or if there is simply not enough information forthcoming about the new partner. Brown Economic's software allows us to conduct the impact of a "hypothetical" partner by making assumptions as to his/her gender, age, education level, and earnings by education level.

A further refinement to the consideration of a new partner can be done with regard to the certainty of the new relationship, i.e., the new partner's contribution can be weighted according to whether it is believed (or not) the survivor will eventually marry the new partner or whether they will live in a common-law, less permanent basis.

In all cases, consideration of a partner allows more refinement and more accuracy than was previously provided by assuming wholesale cessation of the dependency losses upon cohabitation or remarriage by the surviving spouse.

UPDATING NON-PECUNIARY AWARDS FOR INFLATION (OCTOBER, 2011, CANADA)

		Non-Pecuniary Damages - Sample Awards				
Year of Accident/	**"Inflationary"**	$10,000	$25,000	$50,000	$75,000	$100,000
Year of Settlement or Trial	**Factors***					
October 2010-October 2011	1.028	$10,284	$25,711	$51,422	$77,133	$102,844
Avg. 2009-October 2011	1.043	$10,430	$26,075	$52,150	$78,225	$104,300
Avg. 2008-October 2011	1.048	$10,479	$26,199	$52,397	$78,596	$104,794
Avg. 2007-October 2011	1.071	$10,709	$26,772	$53,544	$80,316	$107,088
Avg. 2006-October 2011	1.094	$10,938	$27,344	$54,688	$82,031	$109,375
Avg. 2005-October 2011	1.116	$11,156	$27,891	$55,781	$83,672	$111,563
Avg. 2004-October 2011	1.140	$11,404	$28,509	$57,018	$85,527	$114,036
Avg. 2003-October 2011	1.162	$11,616	$29,039	$58,078	$87,117	$116,156
Avg. 2002-October 2011	1.194	$11,936	$29,840	$59,681	$89,521	$119,362
Avg. 2001-October 2011	1.221	$12,206	$30,515	$61,030	$91,545	$122,060
Avg. 2000-October 2011	1.251	$12,513	$31,283	$62,566	$93,848	$125,131
Avg. 1999-October 2011	1.285	$12,854	$32,135	$64,270	$96,405	$128,541
Avg. 1998-October 2011	1.308	$13,077	$32,691	$65,383	$98,074	$130,766
Avg. 1997-October 2011	1.321	$13,207	$33,017	$66,034	$99,051	$132,068
Avg. 1996-October 2011	1.342	$13,421	$33,552	$67,103	$100,655	$134,207
Avg. 1995-October 2011	1.363	$13,632	$34,081	$68,161	$102,242	$136,322
Avg. 1994-October 2011	1.392	$13,925	$34,812	$69,624	$104,436	$139,249
Avg. 1993-October 2011	1.395	$13,948	$34,869	$69,738	$104,607	$139,476
Avg. 1992-October 2011	1.421	$14,208	$35,521	$71,042	$106,563	$142,083
Avg. 1991-October 2011	1.442	$14,419	$36,049	$72,097	$108,146	$144,195
Avg. 1990-October 2011	1.523	$15,231	$38,077	$76,155	$114,232	$152,310
Avg. 1989-October 2011	1.596	$15,960	$39,900	$79,801	$119,701	$159,601
Avg. 1988-October 2011	1.676	$16,756	$41,889	$83,778	$125,667	$167,556
Avg. 1987-October 2011	**1.743**	$17,428	$43,571	**$87,142**	$130,713	$174,284
Avg. 1986-October 2011	1.819	$18,188	$45,470	$90,940	$136,410	$181,881
Avg. 1985-October 2011	1.895	$18,950	$47,376	$94,752	$142,128	$189,505
Avg. 1984-October 2011	1.970	$19,701	$49,253	$98,506	$147,759	$197,012
Avg. 1983-October 2011	2.055	$20,549	$51,373	$102,746	$154,119	$205,492
Avg. 1982-October 2011	2.176	$21,755	$54,388	$108,777	$163,165	$217,554
Avg. 1981-October 2011	2.410	$24,097	$60,241	$120,483	$180,724	$240,965
Avg. 1980-October 2011	2.711	$27,107	$67,766	$135,533	$203,299	$271,065
Avg. 1979-October 2011	2.985	$29,852	$74,631	$149,262	$223,893	$298,524
Jan. 1978-October 2011	**3.400**	$34,003	$85,007	$170,014	$255,021	**$340,028**

$87,142= $50,000 x 1.743 represents the dollar equivalent in October 2011 of $50,000 based on inflation increases since 1987. Similarly, $340,028 (=$100,000 x 3.400) represents the dollar equivalent in October 2011 of $100,000 in 1978 based on inflationary increases since the month of January 1978.

* Source: Statistics Canada, Consumer Price Index, monthly CPI release, rolling average (except for Jan. 1978).

Consumer Price Index — Unemployment Rate

From Oct 2010 to Oct 2011* (rates of inflation)		For the month of October 2011	
Canada**	2.9%	Canada:	7.3%
Vancouver:	2.1%	Vancouver:	6.8%
Toronto:	2.9%	Toronto:	8.3%
Edmonton:	3.5%	Edmonton:	5.4%
Calgary:	3.3%	Calgary:	5.6%
Halifax:	3.6%	Halifax:	6.0%
St. John's, NF:	3.4%	St. John's, NF:	7.1%
Saint John, NB:	3.9%	Saint John, NB:	5.9%
Charlottetown:	2.7%	Charlottetown (PEI):	11.2%

* Using month-over-month indices. Source: Statistics Canada

** 12 month rolling average up to October 2011 is 2.8% (see table above).

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