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Introduction

Daniel V. Gordon

Welcome to the Spring 08 issue of Economic Commentaries. **EC** is pleased to introduce a new member of the Department of Economics Dr. Joanne Roberts. Dr. Roberts is an Associate Professor and Associate, Canadian Institute for Advanced Research. Dr. Roberts completed both her MA and PhD in the Department of Economics Queen's University. She held a faculty position in economics at the University of Toronto before joining the University of Calgary. Dr. Roberts is an applied economic theorist working in the area of Law and Economics. Her research has appeared in the *American Economic Review*, *Review of Economic Studies*, *Canadian Journal of Economics* and others.

Joanne Roberts

In this issue of **EC** we present four research reports and our Graduate Student Profiles. The first report is by Professors Chris Bruce and Daniel Gordon investigating the impact of the long term economic outcomes of female sexual abuse. In their data set they observe that women sexually abused between the ages of 7-12 show higher levels of education and higher income than non-sexually abused women. The interesting question is whether this result is caused by non-randomness in the data or is there an underlying fundamental cause. The second report is by Professor Eugene Choo looking at the economics of the marriage market. Dr. Choo builds an empirical model that allows him to analyze how marriage and divorce rates respond to aggregate shocks and social changes like the arrival of the baby boomers and the legalization of abortion. This is followed by a report by Professor Jack M. Mintz, Palmer Chair of Public Policy, University of Calgary. Professor Mintz is concerned with the many different government policies to tackle carbon emissions. He argues that a broad-based carbon tax equivalent to 10 cents a litre on fuels would increase the fuel tax yield and allow an offsetting reduction in personal income taxes. Our final report is by Professors Jean-François Wen and Francisco Gonzalez discussing the emergence of the welfare state in the US. They argue that the welfare state is a social commitment device to promote efficiency. Recognizing that redistributive policy can avert social conflict they focus on the provision of social insurance.

In our graduate section of **EC** we profile three recent graduates of our Masters program.

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The Impact of Childhood Sexual Abuse on the Educational Attainment and Adult Earnings of Canadian Women

Chris Bruce ***Daniel Gordon***

Introduction
One of the most complex issues facing the courts in any sexual abuse case is the determination of the impact that the harm has had on the plaintiff's earning capacity. Not only is very little statistical evidence available on this issue, but the data that do exist have often proved to be unreliable.

Recently, this lack of a reputable source has been resolved with the publication of a Statistics Canada survey in which a representative sample of Canadians was asked about their experiences of victimization. From this survey, we were able to obtain information about a large set of (adult) women who had suffered sexual abuse as children.

The purpose of this paper is to report our findings concerning the consequences of that abuse on the educational attainment and earnings of the victims. Our surprising result is that, among *most* such victims, *abuse does not have a statistically significant effect* on adult education and earnings. Furthermore, in the only group for which abuse *was* found to have a significant effect – women who were first abused between the ages of seven and twelve – education and income were *higher* than among women who had not been abused.

The remainder of the paper is divided into three sections: a review of the existing literature; the development of an economic model concerning the effect of abuse; and a summary of our statistical findings.

Existing Literature
The academic literature concerning the effects of childhood sexual abuse is composed of two streams. In the first, researchers have attempted to develop theories of childhood social-psychological development that can be used to understand the pathways by which abuse affects its victims. In the second, researchers have used statistical tests to identify correlations between abuse and its predicted outcomes, such as depression, alcoholism, and school completion rates.

Theoretical
Many theories concerning the impact of sexual abuse are founded on the "core-symptom" model, in which a core problem or event is presumed to have led to one or more symptoms. The most common of these models characterize sexual abuse as a trauma, leading researchers to predict that abuse will result in post traumatic stress disorder

An alternative interpretation suggests that, rather than having a single effect, sexual abuse might produce multifaceted effects. Finkelhor and Browne (1985), for example, argued that sexual abuse had four primary effects: traumatic sexualization, stigmatization (i.e. low esteem and self-destructive behaviour), betrayal, and powerlessness.

A third approach, "developmental models," proposes that sexual abuse may affect victims by interfering with development in areas such as social and self-functioning. In this view, therefore, the age at which the child is abused may be a critical determinant of the long-term effects of that abuse. For example, Celano (1992) suggested that the impact of sexual abuse may differ among Piaget's three stages of childhood moral development (Piaget, 1965): preschool (ages 0-6), latency (7-13), and adolescence (14-19). She hypothesised that whereas preschoolers may not recognise that abuse is morally reprehensible, and adolescents may consider their moral culpability to be ameliorated by failure to provide informed consent, children in the latency period may consider themselves (at least in part) to be responsible for many of the types of abuse. Accordingly, she predicts that abuse will be most harmful if it occurs in the latency period.

Statistical

Statistical studies can roughly be divided among those that investigate the effect of sexual abuse on: psychological factors, (such as depression, self-esteem, and sexuality); social outcomes, (such as alcoholism and delinquency); and economic outcomes, (specifically, schooling and adult income).

This literature is virtually unanimous in its finding that childhood sexual abuse has statistically significant effects on the victim's psychological well-being. The outcomes that are most commonly found include: low self-esteem, post-traumatic stress disorder, depression, affective and personality disorders, and anti-social behaviour.

The sociological literature has provided evidence concerning the effect that abuse has on criminal activity. Studies that aggregate across a number of different types of childhood abuse – neglect, physical abuse, and sexual abuse, for example – commonly find that criminal activity is correlated with this aggregate; although some find no statistically significant correlation. Importantly, however, when "abuse" is separated into its components, it is only 'neglect' that is found to be correlated with criminal activity. Neither physical nor sexual abuse appears to be a significant determinant in this formulation.

Very mixed results have been obtained when researchers investigate the impact of abuse on schooling and income. Slade and Wissow, (2006) found that individuals who had been maltreated as children had lower high school GPAs than the control group, but no greater problems with teachers, with completion of homework, or with school absences. And some studies have found evidence that victims of childhood sexual abuse performed *better* in school than those who had not been abused (e.g. Eckenrode, *et al.* 1993 and Buckle, *et al.* 2005).

Economic Model

In our model, we assume that individuals divide their time among three activities: solitary leisure activities, such as reading, watching television, and playing video games; social leisure activities, such as team sports, club memberships, and interacting with friends; and "market" activities, such as investing in education and working in the labour market. The value of each activity increases as additional time and effort is devoted to it. And the "cost" of time spent in any one activity is the value that is foregone from the other activities (the "opportunity cost" concept so familiar to economics students).

We hypothesize that the effect of sexual abuse is to reduce the benefits that individuals obtain from each of the three activities. Normally, one would expect that this would lead to a reduction in each of them. However, assume that the negative effect on the time and effort devoted to two of the activities was greater than it was on the remaining one. In that case, it is possible that the victim might "substitute" away from the more seriously-affected activities towards the less-seriously affected one. As a result, the latter might even increase.

For example, if abuse had a much more significant (negative) impact on the individual's ability to socialize than on her ability to undertake schoolwork or to compete in the labour market, abuse might lead to a lesser reduction in the latter activities than expected, and could even lead to an increase in those activities. In common parlance, the individual might be said to have compensated for the harm to her socialization skills by "throwing herself" into academic and work-related activities. In such a case, abused individuals might be observed to complete *more* years of education than the non-abused, and might earn higher incomes; but this would come at the expense of a significant withdrawal from normal social activities. We propose to test for this effect in the analysis reported in the next section.

Statistical Estimates

We obtained information concerning 6,528 adult Canadian women, (drawn from the 1999 General Social Survey), of whom 607 reported that they had been sexually abused as children. Using the data from this survey, we conducted two statistical tests.

In the first of these, we estimated the effect of a series of variables on educational achievement. The variables that are usually found to be important - such as parents' education, individual's place of birth, and whether the individual belonged to a "visible minority" – all proved to be significant in our data. In addition, we found that if the individual had first been sexually abused between the ages of seven and thirteen, she obtained *more* education than did individuals who had not been abused or who had first been abused before seven or after thirteen.

In our second test, we estimated the effect of a number of background variables on adult earnings. As expected, we found that variables such as the individual's education and whether she belonged to a visible minority had significant effects on income. And, again, we found that individuals who had been abused between the ages of seven and thirteen had statistically *higher* levels of income than did those who had not been abused or who had first been abused before seven or after thirteen. Importantly, this effect is *in addition* to the increase in income that would have arisen from the effect of abuse on education.

To summarise, we found: first, that abuse before the age of seven or after the age of thirteen had no statistically discernable effect on either the victim's education or her adult income. Second, abuse between the ages of seven and thirteen increased average educational levels and increased average incomes, both directly and indirectly (through the effect on education).

Conclusion

We have found that, *on average*, sexual abuse is not associated with lower educational levels or lower adult incomes among victims. This does not mean that all victims have higher income levels than those who have not been victimised: some victims will be above-average and some below. When the court is dealing with a particular plaintiff, it should always rely on factors that are specific to that individual. Nevertheless, our results suggest that it cannot be concluded, without such specific information, that the individual's adult income will be adversely affected by sexual abuse.

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The Economics of the Marriage Market

Eugene Choo

Economists have long puzzled over the process of individuals meeting and matching in the marriage market. Participants typically differ along horizontal dimensions such as age, race, religion etc. as well as along vertical dimensions such as income and education. If we focus on the marriage distribution by spouses' age, we observe much well known empirical regularity. There is positive assortative matching in spousal ages at marriage. That is, spouses tend to be close in age. Except for the youngest age groups, marriage rates decline with age. And men generally marry younger women. How much of these empirical features are a reflection of the preferences that drive individuals to find a partner?

How do we disentangle the confounding effects of supply differences of different types of individuals? For example, marriages between same aged individuals are empirically more frequent. How much of this high relative frequency is driven by individuals' preferences for partners that are close in age as opposed to supply considerations like the higher availability of same aged individuals in ones' environment. It is also known that the birth rate of males is slightly higher on average than that of females. For example, in 1990/91 in the United States, 4% more males than females were born.[1] However, mortality rates increase much faster with age for men. Even with more boys than girls being born, women still outnumber men in the United States. In 2003, the Census Bureau estimated a total of 144,513,361 females of all ages, compared to 138,396,524 males. Since women have longer life expectancies than men, older men are scarce relative to older women in the marriage market. This relative scarcity of older men might advantage them in the marriage market providing them with better marriage possibilities with younger women.

A further complication is the role of technological and social change. In the United States and Canada, technological innovations like the invention of the birth control pill and the legalization of abortion have significantly changed the opportunities of women since the seventies. These social changes inadvertently affect the value to marriage and the family. How have these social changes affected the way individuals match.

In a series of papers with Aloysius Siow, I attempt to answer some of these questions. The primary goal of our research has been to develop an empirical model of marriage that embeds various possible explanations of these regularities. While many theories have been proposed to explain these regularities, there is little work on testing these various possible explanations. In particular, we want to answer the question, what characteristics of the return to marriage can explain these features of the marriage distribution. A complete model will aid in the understanding of how marriage rates respond to changes in supplies of single entrants over time. More important, the model should allow us to analyze how marriage and divorce rates respond to aggregate shocks and social changes, like the arrival of the baby boomers and the legalization of abortion.

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[1] For example, according to the National Vital Statistics Report, 2005, the highest sex birth ratio occurred in 1946 (1,059 male births per 1,000 females) while the lowest occurred in 1991 and again in 2001 (1,046 male births per 1,000 females).

We propose a frictionless characterization of marriage formation that can be taken to aggregate data. It allows for heterogeneity in the perceived gains to marriage, that is the value of marriage differs by the type of individual. Relative scarcity of various types is endogenized using transfers of systematic gains to marriage that clear the demand and supply of spouses. The idea being that individuals of more desirable types would on average require a larger share or transfer of the common gains to marriage and would only attract partners that are more able to pay these transfers. Similarly, types that are desirable and scarce would on average require a larger share of the marriage pie. Our equilibrium model allows us to capture the marriage gains relative to remaining single using relatively simple statistics. These gains are the primitives that drive individuals to match and are invariant to changes in the relative scarcity of different types of individuals. For example, the number of matches between two types scaled by the geometric mean of the unmarrieds of both types measures the systematic marriage gains relative to remaining single. Another useful statistics uncovered by our research is the annual growth rate of marriages provides a measure of the perceived gains to marrying today as opposed to delaying one year.

Our research showed that compared to the bi-variate distribution of marriage by age, the distribution of the estimated total gains are less peaked and less concentrated. While it remains true that the marital gains are highest for couples that are close in age, the total gains are also larger off the age diagonal and for older individuals than would be predicted from a bi-variate marriage distribution. The systematic gains rise with age, and are highest along the age diagonal. The ridge along the age diagonal shows that the total gains fall faster for women married to younger men than for men married to younger women.

We used this model to analyze the national legalization of abortion in the US in 1973. Legal abortions were already available in some states by 1970. Before 1967, legal abortion was generally unavailable. Between 1967 and 1973, legal abortion became easier to obtain in several states. We'll refer to these states as reform states.[2] In January 22, 1973, due to the United States Supreme Court ruling in Roe v. Wade, legal abortions became available in the entire country. This ruling provided less restrictive access to abortion than what was available previously in the reform states. If the availability of legal abortions in a state reduced the gains to marriage in that state, we would expect to see lower gains to marriage in reform states relative to non-reform states in 1971/2 but not in 1981/2. Moreover this difference in difference in the gains to marriage should be concentrated among women of child bearing age and the men who marry them.

Indeed, our research showed that the largest drop in the gains to marriage from this national legalization of abortion is concentrated among similar aged couples between the ages of 19 to 26, living in reform states in 1971/72. We also see a small increase in the gains to marriage for same aged spouses, between the ages of 27 to 40. These gains are explained by young individuals who would have gotten married had abortion not been legalized. This social change allowed these individuals to delay marriage to an older age. Using our estimates we asked the counterfactual question - what would marriages have been like if the non-reform states also partially legalized abortion in 1971/72 like the reform states. For males and females aged 16 to 25 years old, partial abortion legalization in the non-reform states would have lowered the number of total marriages in this age group by 4.2 % and 3.6 % respectively. For males and females older than 26 years of age, this social change would have

[2] The reform states included in our analysis are: Alaska, California, Delware, Florida, Georgia, Hawaii, Kansas, Maryland, North Carolina, Oregon, South Carolina and Virginia.

increased the total number of marriages in this age group by 3.8 % and 5.2 % respectively.

Much of the research described so far makes the convenient assumption of complete horizontal differentiation. My current ongoing work with Shannon Seitz and Aloysius seeks to relax this assumption by allowing more vertical attributes like income and labor supply. This necessitates a model of intra-household decision making. In particular we need to address how much agents work and how this is affected by their marriage market prospects. Our current research combines the influential collective model of the household and the marriage matching framework.

This literature is important from a policy perspective mainly because there is typically little or no data on intra-household decisions. Such information is very useful and important in analyzing the effects of various wealth enhancing social programs. Since policy makers are typically interested in the welfare implications of policies for individuals and not households, the distinction between what a policy change implies for a household and for individuals within households is subtle but important. Our framework uses both the labour and marriage market information of household members to identify how the sharing rule changes with wages and other factors that influence bargaining power and marriage prospects under a minimal set of assumptions.

Carbon Pricing Policies

Carbon pricing policies pursued by federal and provincial governments are like a horse race these days. Each government is bolting out of the starting gate except running in different directions.

The effect is a hodge-podge of policies being adopted e.g. carbon taxes in BC and Quebec, regulations in Ontario and a levy on excess emissions in Alberta, are quite different applications. The federal government has its own plan that is a levy on emissions in excess of an intensity-based target with amounts returned to companies if spent on carbon-reducing technologies.

Jack Mintz

A sensible approach that would appeal to many businesses would be to create a platform for harmonized federal and provincial carbon pricing policies.

To achieve better policy, carbon taxes are increasingly considered a good option to price carbon on a comprehensive basis that would affect consumers and businesses, not just emissions caused by big emitters that tend to be the focus for regulatory and tradable permit schemes.

If the federal government restructured an existing tax say, the federal fuel excise tax on gasoline and diesel and broadened it to include more fuels it could create a general environmental tax of which its revenues could be used to reduce harmful taxes to the economy. The federal tax could also be used as model for provincial taxes that could be similarly levied.

Nancy Olewiler[3] of Simon Fraser University and I have estimated that a broad-based carbon tax

[3] The Mintz-Olewiler paper entitled “A Simple Approach for Bettering the Environment and the Economy: Restructuring the Federal Fuel Excise Tax” is available at www.sustainableprosperity.ca

equivalent to 10 cents a litre ($42 per carbon tonne) on all fuels would increase the existing fuel tax yield of $5 billion to $17 billion, once taking into account behavioural changes that would lead to a reduction in emissions. This policy would permit governments to reduce corporate and personal income taxes by 8 percent.

The idea of converting the federal fuel excise tax into a broad-base carbon was suggested by the federal Technical Committee on Business Taxation ten years ago. The concept was to keep tax revenues constant so that any broadening in the tax base would be accompanied by tax reductions elsewhere. At that time, the Committee recommended a reduction in the gas tax although it could have considered using the revenue to reduce other taxes.

Consistent with this approach, British Columbia introduced a carbon tax escalating from $10 to $30 per carbon tonne over the next three years with the revenues used to reduce the corporate and personal income taxes as well as provide a tax credit for low-income households to cope with higher fuel prices.

A good case can be made for carbon taxation of some form compared to other potential policies such as regulations or cap-and-trade systems. While regulations and cap-and-trade systems provide greater certainty in meeting targets for emission reduction, carbon taxes provide greater certainty to pricing policy. This is particularly important to capital-intensive industries when making large investments to adopt new technologies, including carbon capture and storage.

However, carbon taxes would have a significant impact on consumers and businesses. Prices will rise reflecting the carbon tax for many products e.g. utility prices and energy-intensive products. Low-income households would be hit hardest since heating and transportation services are more important cost in their budgets compared to those with higher incomes. Business facing higher fuel costs will be less competitive in export markets and less able to compete with imports coming from abroad.

If the carbon tax revenues are used to reduce high marginal personal and corporate tax rates (including those faced by low-income Canadians subject to a host of income-tested benefits), Canada's tax system could be made more efficient and fair. Thus, using the carbon tax revenues to reduce corporate and personal taxes is imperative not only to help reduce emissions but also economic harm caused by taxation.

While economic and environmental benefits can be achieved with a carbon tax accompanied with tax reductions, significant issues are involved in attempting to levy such taxes.

Carbon taxes are not pure consumption taxes in that they will affect business costs. Although one could exempt exports and tax imports of carbon in fuel products, it would be complicated to apply border adjustments either to exempt carbon contained in exported manufactured products or to apply a carbon tariff equal to the rate applied on domestic emissions. This is even further complicated in that Canada would wish to recognize carbon pricing efforts in other countries if applying a carbon tariff - this is impossible to achieve with the operation of global supply chains without creating trade disruptions.

Further, much of what Canada will do depends on policies adopted in other countries. If a cap-and-trade system for large emitters develops in the US, Canada might wish to harmonize its policies with American ones to minimize economic effects. A carbon tax, however, could still be applied since it is more comprehensive on all parts of the economy although it would need to mesh with cap-and-trade systems to avoid double taxation, which is done in Europe.

While international issues abound in designing a proper carbon tax, an even more complex problem is with respect to regional effects. Alberta and Ontario are the two largest emitters. Also, several provinces will wish to protect the economic benefit derived from their owned resource wealth. Provinces might therefore prefer having their own carbon taxes to keep revenues for themselves. However, given the competitiveness issues, it is unlikely that they would levy such taxes without significant exemptions for export-oriented provincial businesses. For this reason, a federal tax may be superior since trade adjustments can be achieved.

Any federal carbon tax should be returned as tax cuts in a regionally-neutral manner. Carbon taxes used to reduce personal and corporate taxes and fund tax credits for carbon-reducing taxes could be set to minimize regional impacts.

Whatever the course of action, governments have a significant challenge on their hands. Converting the federal fuel excise tax into a carbon tax is an interesting policy approach to consider if it can lead to better and more harmonized pricing in Canada. However, its design is not a simple matter in a federation quite open to trade flows.

The Emergence of the Welfare State in the United States

Social spending rose enormously in all rich democratic societies over the twentieth century. By the 1970s the modern structure of the welfare state was in place, consisting of an array of programs mainly designed to protect families against various income risks.

Jean-François Wen

Francisco Gonzalez

Conventional wisdom attributes the rise of the welfare state to demographic changes, coupled with economic growth, which created increasing social demand for redistribution and the means to meet it. This view presumes that social demands are either fulfilled by a benevolent state or mediated through electoral competition. It also takes for granted that those individuals with political power can commit not to use their power solely in their self-interest, to the exclusion of others in society. Historically, however, significant social spending is allocated in a pro-poor fashion each year, whereas political influence rises with income. What then determines the supply of social insurance?

We argue that the welfare state is a social commitment device to promote efficiency. The commitment problem involves specifically the inability of those individuals with political power to commit not to expropriate others. The efficiency gains come from insurance against income risks and also avoidance of social conflict. In particular, we argue that social insurance is part of a self-enforcing, risk-sharing, mechanism to balance distributional conflict between socio-economic groups.

A key distinction is between those individuals who control public policy, the governing group, and those who cannot, the non-governing groups. The power of the governing group to confiscate income is assumed to be limited by the ability of the non-governing groups to engage in social conflict. Then, in the presence of group-specific income risks, it is in the self-interest of the governing group to make taxes and transfers contingent on income realizations as well as on group identity. In particular, income is transferred towards a given non-governing group when its income is low and the actual income of the governing group is high. From this standpoint, social insurance is supplied by the governing group as part of a program designed to optimally extract social surplus.

Repeated strategic interaction between the governing and the non-governing groups enables the latter to obtain a share of the efficiency gains from risk-sharing and cooperation, even though they do not have the power to control social transfers directly.

Thus, our approach shares the common view that redistributive policy can avert social conflict, and that the threat of conflict endows social groups with de facto political power. However, in contrast to previous researchers, our focus is on the emergence of the welfare state, and in particular on the provision of social insurance.

When we explore the implications of such a view, we obtain several insights about social insurance programs. First, a higher degree of aggregate risk can result in more redistribution toward individuals that do not have direct control over social policy. This is because a riskier economic environment makes it more difficult for the governing group to meet the participation constraints of the non-governing groups. As will be discussed later, this logic helps explain the timing of the introduction of the Social Security Act (1935) in the United States following the Great Depression.

Second, it is in the best interest of the governing group to create distinct transfer programs, each targeting a group of individuals who are subject to common income risks. This observation is interesting because it explains why technical improvements in public administration and record keeping may have been an important force behind the proliferation of transfer programs and the enlargement of insurable events, which characterized the growth of the welfare state in the 1950s and 1960s. It also portrays the expansion of the welfare state as a process of exploiting efficiency gains from social insurance.

A further implication is that, although social transfers are conditional on income, they should not be understood as being purely means-tested, since they depend on the underlying risk and not just on the observed income realization. Thus different groups with similar realized incomes in a given period may receive very different transfers.

Finally, the ability of non-governing groups to coordinate their social demands and their threats of social conflict is an important determinant of the allocation of social surplus across groups. An implication is that more redistributive welfare states result when members of a society can overcome their coordination problems and agree to place larger social demands on the state. The self-enforcing nature of the social contract then compels the governing group to take into account those social demands and choose either to respect them or to embrace social conflict. Historically, external threats, such as the Vietnam War in the case of the U.S., may have served as a coordination device to mobilize distinct social groups (Domhoff, 1990).

Our argument is in contrast with conventional explanations of the welfare state, which view social programs as either altruistic or designed specifically to give social protection to those with direct political influence, e.g., pivotal voters. Whether the governing group is the top 1% of the income distribution, as a power elite approach contends, or the middle income voters as an electoral approach might, is not important for our main arguments, although it does have empirical implications. We simply take as given that there is such a governing group and we consider a period of time where the governing group is stable.

The emergence and growth of the welfare state in the U.S. supports our view of the welfare state as a social commitment device to promote efficiency. Domhoff (1990, 1996), Quadagno (1984), and Alston and Ferrie (1993) have all stressed the role of political elites in the formation of the welfare state in the United States. In her discussion of the Social Security Act of 1935, which marks the birth of the U.S. welfare state, Quadagno (1984, p. 644--645) remarks:

> Business executives had a direct impact on the Social Security Act by serving on policy-forming committees and by testifying before Congress. They also exerted influence in a less formal manner through a variety of interactions with state managers who held varying degrees of power. Tactics included informal discussions with Roosevelt and committee members, letter writing, proposal development, and attempts to co-opt lesser figures.

Alston and Ferrie (1993) observe that Southern large plantation owners formed a major segment of the U.S. governing group for a century preceding 1970, operating through overwhelming Congressional committee control via the Democratic Party. The rural elite's political objectives were to maintain low wages and to secure federal agricultural subsidies for large plantations. The Southern landowners ensured that the unemployment insurance component of the 1935 Social Security Act excluded farm workers and that public assistance programs were administered by the states rather than the federal government.

Alston and Ferrie note further that farm mechanization in the 1950's significantly reduced the need for plantation workers and that it was increasingly in the interest of Southern landowners to promote the out-migration of blacks to Northern states. Thus, commenting on the Economic Opportunity Act, which was the centerpiece of the Johnson Administration's War on Poverty, Alston and Ferrie (1993: 868-9) write:

> Given the essentially static power position of Southerners in the House and their increased power in the Senate in the 1960's it is extremely unlikely that the welfare state programs of the 1960's could have emerged from Congress without the countenance of Southern congressmen. Not only did Southerners have the agenda control which committee power and their importance within the Democratic Party produced, but …both Kennedy and Johnson needed the Southern vote in order to pass welfare legislation.

Tracing the emergence of the U.S. welfare state to the preferences of a rich and powerful elite begs the question: Why did this elite implemented the Social Security Act of 1935? In particular, "[i]t is also important to explain why a piece of legislation with such a high level of "class content", i.e., a social-welfare measure, was implemented with almost no working-class input" (Quadagno, 1984, pp. 644--645).

The logic of our theory can shed light on the role of the Great Depression in the timing of the Act, by explaining why those with political power benefited from it. According to our argument, the social programs introduced by the Act were the governing group's optimal response to the fact that increased aggregate risk made the participation constraint of some of the non-governing groups harder to meet. Weaver's (1983) observation that social movements such as the Townsend movement were ineffective in bringing about social insurance prior to the Great Depression can be explained by the fact that the increase in aggregate risk had not yet been clearly perceived. Furthermore, this view is consistent with the decline in the income shares at the top of the distribution in the decade following the Act.

Broadly speaking the development of the welfare state since the Great Depression has been one of enlargement of insurable events and gradual extensions of eligibility to include previously excluded groups of individuals. By showing that it is in the best interest of the governing group, whenever possible, to create distinct transfer programs, targeted to group-specific risks, our approach provides a reason why the rise in social transfers after World War II may owe much to technical improvements in public administration. Thus advances in record-keeping, especially automated data processing which originated during World War II, permitted extensions of social insurance to cover many more occupations and additional types of risks. An examination of the record-keeping history of the Social Security Administration in the U.S. corroborates our view. In 1956 the Social Security Administration installed the first large-scale computer to maintain records and in 1958 the Index was microfilmed. Before then:

> [T]he names were typed on flexible strips inserted in metal panels and hung on racks like pages in a book. With 119 names to a panel and 1,600 panels to a rack, the mammoth file took up a city block of floor space. It was growing at the rate of about 3 million names a year and required 6,000 additional square feet of space every 12 months.[4]

An integrated data processing system was put into effect in 1965. This record of adoption of new methods is strongly suggestive that the welfare state could not have expanded in the same way prior to World War II, nor after the 1970s, since by then the basic, necessary record-keeping technology was already in place. To our knowledge, this technical change explanation for the increase in transfers during the 20th century has not been adequately emphasized.

In addition to technical change, social coordination appears to have played a role in explaining the growth of the welfare state after World War II. Domhoff (1990) has argued, for example, that the Vietnam War served as a coordination device to mobilize distinct social groups. By showing how the ability of non-governing groups to coordinate their social demands determines the extent of redistribution, our argument sheds light on the role of the increasing demands of disparate social groups that culminated in the mass protests and riots of the 1960s. The more recent fragmentation of these groups may similarly explain the ongoing erosion of protection against risks (Hacker, 2004).

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The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy.

Martin Luther King

A dreamer is one who can only find his way by moonlight, and his punishment is that he sees the dawn before the rest of the world.

Oscar Wilde

The most beautiful experience we can have is the mysterious - the fundamental emotion which stands at the cradle of true art and true science.

Albert Einstein

[4] See SSA History: Social Security U.S.A. -- The Program & Its Administration, http://www.socialsecurity.gov.

Graduate Student Profiles

Beata Komierowski
MA Economics, University of Calgary 2008
BA Economics, University of Calgary 2006
BSc Biology, University of Calgary 2006

Beata is a research analyst with ARC providing internal research on energy commodity prices, business cycle timing, technological trends and capital markets valuation parameters for the purpose of supporting and maximizing ARC's investment strategy. Her primary focus is analytical support, including modeling and evaluating energy market trends.

Jason Strauss
MA Economics, University of Calgary 2007
BA Business Economics (Honours), University of Saskatchewan 2004

Jason is currently with Economica Ltd. working on a series of reports for the Canadian Bar Association on automobile insurance premium rates, profitability, costs, and various legislative matters. In August 2008, Jason will begin a PhD programme in the Department of Risk Management and Insurance at Georgia State University.
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Sarah Lang
BA Economics (Honours) University of Calgary 2005
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Sarah is a speed skater and is training to earn a spot on the US 2010 Olympic Team. She is also a spokesperson for the Crohn’s and Colitis Foundations of America and Canada, Procter & Gamble and the Canadian Society of Intestinal Research.

On the economics side, she hopes to promote her research through the Dove Self-Esteem Fund Campaign, and, in her words, ‘now that my Masters is complete, I am probably going to have to enter the real world.’

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