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Article abstract

This article investigates whether older workers affected by plant closures are more likely to be "discouraged" from participation in the labour force and to be "bitter" towards employers as well as whether they are less likely to report "career growth" in subsequent employment situations. The data indicated that older workers are less likely to report the poisoning effect and more likely to report the career-growth effect. In addition, post-closure training activities reduced the likelihood of the discouraged-worker effect for the 45-55 age group. The respondents from the older age groups who undertook post-closure training activities were more likely to report the poisoning effect and less likely to report the career-growth effect. In the final section, we argue that the results relate to the definition of the age groups, the transferability of human capital, and the value of community support. We also highlight the implications of the results for public and institutional policies.

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MAURICE J. MAZEROLLE
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This article investigates whether older workers affected by plant closures are more likely to be "discouraged" from participation in the labour force and to be "bitter" towards employers as well as whether they are less likely to report "career growth" in subsequent employment situations. The data indicated that older workers are less likely to report the poisoning effect and more likely to report the career-growth effect. In addition, post-closure training activities reduced the likelihood of the discouraged-worker effect for the 45-55 age group. The respondents from the older age groups who undertook post-closure training activities were more likely to report the poisoning effect and less likely to report the career-growth effect. In the final section, we argue that the results relate to the definition of the age groups, the transferability of human capital, and the value of community support. We also highlight the implications of the results for public and institutional policies.

One of the most prominent issues in employment relations concerns the aging population. In 1851, the median age of the Canadian population was 17.2 years old (Beaujot 1991). By 1991 it had increased to 33.5 years old and it is estimated to rise to 37.5 years old by 2001 (McKie 1993). The aging population will likely present a number of challenges for the actors in the employment system. Policy makers will need to consider the economic viability of social security, employers will need to balance the advantages and disadvantages of early retirement, and unions will need to reconsider

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strategies which regard older workers as lost to the labour movement (Singh 1998).

In addition to the challenges which the aging population presents for the institutional actors in the employment system, older workers themselves are required to make a number of adjustments with respect to a changing workplace. Traditionally, one of the most widespread employment outcomes included a "psychological contract" in which workers exchanged commitment and loyalty for long-term employment (Waterman, Waterman, and Collard 1994). Recently, the employment relationship has been transformed (Kochan, Katz, and McKersie 1993) and many employers have downsized to remain competitive in a global economy. According to Waterman, Waterman, and Collard (1994), many employers have terminated the "psychological contract" of employment and have replaced it with the notion of resilient careers. Employers no longer guarantee long-term employment. Instead, they offer assistance to employees so that they can compete for jobs in the general labour market.

The mechanisms to end the employment relationship range from temporary layoffs, to permanent layoffs, to plant closures. For plant closures, employers either permanently move to another location or completely shut down their operations. In cases of relocation, many employees are unable to move with their employers. Thus, plant closures usually result in worker displacement (Hamermesh 1989). Gardner (1995) reported that over 5 million workers in the United States were displaced between 1991 and 1992. Similarly, the Ontario Ministry of Labour (1993) indicated that the number of workers in Ontario permanently losing their jobs to mass layoffs has been increasing over the last ten years. Moreover, displacement has become more visible among white-collar and older workers (Gardner 1995; Hamermesh 1989; Ontario Ministry of Labour 1993).

In this paper, we examine how older workers adjust to plant closures. We begin with a brief review of the literature on worker displacement. This is followed by an outline of three ways in which workers could adjust to layoffs from plant closures — the discouraged-worker effect, the poisoning effect, and the career-growth effect. We then briefly review the structural theory of inequality, outline the stereotypes working against the employability of older workers, and state three propositions on the relationship between the discouraged-worker, poisoning, and career-growth effects and older-worker status. Subsequent sections describe the methodology and the results. The final section contains a discussion of the results and their implications.

WORKER DISPLACEMENT

The definition of a displaced worker is a contentious issue from both an academic and a policy perspective. Nevertheless, Fallick (1996) indi-

cated that there is a consensus on three characteristics of displaced workers: (1) there is a structural cause for the displacement; (2) displaced workers do not have the ability to return to a similar job in a reasonable span of time; and (3) displaced workers face barriers in terms of mobility between different sectors. According to Fallick (1996), it may be appropriate to clearly identify a group of workers that is displaced or adopt a statutory definition of displaced workers when assessing displacement issues.¹ In almost all cases, workers who lose their jobs as a result of plant closures are considered to be displaced.

As previously indicated, estimates of displaced workers in the United States range from 4.1 to 5.6 million people between 1984 and 1992 (Herz 1991; Gardner 1995). It is not clear what proportion of the overall amount resulted from plant closings. But Hamermesh (1989) concluded that job loss from plant closures has increased between the 1960s and the 1980s. Tenure and industry have been key determinants of displacement, with tenure negatively correlated with displacement and manufacturing, mining, and construction industries positively related to displacement (Farber 1993). Age, race, marital status, family status, and geographical locations have not been shown to affect displacement (Seitchik 1991).

Fallick (1996) identified four consequences of displacement: non-employment, earnings, human capital, and policy-related issues. First, displaced workers have higher rates of non-employment, with the duration of jobless spells positively related to tenure and union membership. In addition, the duration of joblessness is lower for those who were displaced by plant closings than for those displaced for other reasons (Swaim and Podgursky 1991). Second, earnings are lower for jobs just subsequent to the period of displacement (Rhum 1991). Third, human capital has the tendency to offset some of the loss of income associated with displacement, which suggests that some human capital is transferable (Kletzer 1991). Fourth, job training, unemployment insurance, and notification arguably mitigate the negative consequences of job displacement (Leigh 1991).

ADJUSTMENT TO PLANT CLOSURES

The Discouraged-Worker Effect

Job displacement may encourage workers to withdraw from the labour market (discouraged-worker effect). In other words, the discouraged-worker effect describes those people who are unemployed and would take a job if one was available, but who have given up looking since they believe that

1. For an extensive review of the literature on displaced workers, see Fallick (1996), Hamermesh (1989), and Howland (1988).

no jobs are available (Stevens, Register, and Grimes 1987). These individuals tend to stay out of work for longer periods of time than other unemployed people and they tend to leave the workforce earlier than might otherwise be expected (Welton 1975).

The Poisoning Effect

Displaced workers may return to work for another employer but carry a "bitter" attitude toward employers on the whole. Essentially, the poisoning effect describes individuals who become resentful towards their former employers because of job loss and carry that resentment forward to subsequent employment relationships. The poisoning effect could cause permanent damage to individuals' future employment relationships (Braginsky and Braginsky 1975; Fineman 1983). For some people, especially late mid-career employees, job loss represents a permanent career disruption from which they may never recover. This is often reflected in feelings of uncertainty about their employment situation, a lower commitment to their job, and cynicism, all of which carry over at least to the next job (Latack 1984). This may manifest itself in feelings of mistrust toward future employers, which if left unchecked could take on the characteristics of a self-fulfilling prophecy (i.e., going into a new employment situation with negative expectations tends to attract negative feedback, which only serves to confirm the person's original belief).

Although this type of effect has been primarily associated with the involuntary terminations of managerial employees as a result of firings, mergers, and downsizing, there remains a question as to the applicability of the term to job loss that results from plant closures (Rhum 1991). In a closing situation, individuals are not being singled out for special treatment and the loss of employment is associated with circumstances beyond their control. The fact that individuals have had nothing to do with the reason for losing their jobs may result in those people directing any negative feelings they have about their situation toward their former employer. It is one thing to harbor ill feelings about a former employer, but quite another to transfer those feelings to subsequent employers.

The poisoning effect has been characterized by three factors (Latack and Dozier 1986; Fineman 1983). The first factor is related to the degree to which people have negative feelings about their current or most recent employment situations relative to the job they held at the closed plant. While negative feelings about a current situation can exist independently of the plant closure, the presence of such negative feelings is a necessary but not sufficient condition for the observation of the poisoning effect. The second factor is associated with individuals' lack of involvement with and commitment to their work relative to what they had experienced in the job

lost through the plant closure. This may be related to the first factor, in that feelings of uncertainty may reduce the amount of investment people are willing to put into their job if they feel their situation is not secure enough to allow them to benefit from the fruits of their labour. In addition, if a feeling of failure accompanied the loss of the first job, then one way of guarding against a recurrence would be to minimize the commitment to the new job and the organization (Fineman 1983). Third, the poisoning effect is related to the degree to which people have feelings of mistrust and cynicism toward their employers. This is particularly the case where individuals did not have these feelings in their original employment relationships. This could also result from those individuals who become unsatisfactorily re-employed. Once again, any number of factors could result in these feelings, but if the combination of these feelings is present in individuals and if they only began to manifest themselves following the plant closure, then there is a strong probability that the original job loss had a significant effect on the individuals' behaviour.

The Career-Growth Effect

The career-growth effect describes those who lose their jobs and subsequently move onto interesting and fulfilling employment relationships. Losing one's job is without question a stressful event (Warr 1984). But stressful life events can lead to growth since such events can spur people to consider new alternatives, develop new competencies, and restructure their lives in positive directions (Schlossberg 1981; Sheehy 1981). Career growth, viewed within this context, means more than surviving the layoff and finding another job. It means finding another psychologically fulfilling job and concluding that the gains resulting from this employment transition outweigh the losses (Hall 1976).

THEORY AND PROPOSITIONS

In terms of the discouraged-worker, poisoning, and career-growth effects, we propose that older workers are likely to adjust to plant closures differently than younger workers. According to structural theories of inequality, demographic attributes such as age, race, and gender are important criteria with respect to employment opportunities (Marini 1989). And, for a number of reasons, the employment opportunities of older workers are limited. Employment barriers for older workers stem from both the attitudes of older workers and employers (CARNET 1995). Older workers themselves can contribute to their unemployment problems because they are less likely to retrain than younger workers (Picot and Wannell 1987: 11; Canadian Employment and Immigration Advisory Council 1985: 12). In addition, older

workers are more likely to remain in their community rather than relocate into areas with more employment opportunities (Widgor and Foot 1988: 18; Picot and Wannell 1987: 9; Sampson 1981: 34). Of course, retraining and relocation decisions may not be entirely in the hands of older workers as they may face barriers to retraining from a number of sources, including family background, less exposure to institutions such as colleges, as well as past negative experiences with retraining (Picot and Wannell 1987: 12).

Employers also entertain attitudes that negatively affect the employment prospects of older workers. These attitudes are related to many stereotypes about older workers: (1) they are less productive than younger workers; (2) they have a higher rate of absenteeism than younger workers; (3) they are a bad investment because they will only remain in the labour force for a short period of time; and (4) they are difficult or unwilling to retrain. Tindale (1991: 22) reported that there is substantial evidence on the negative relationship between performance and age. However, many older individuals retain their intellectual abilities into their 80s (Tindale 1991: 23) and their capabilities far exceed the demands of most jobs (Bourne 1982: 41). Technology has lessened the physical demands of many jobs (Rosen and Jerdee 1985: 24) and the negative association between performance and age may be relevant only for a few jobs which require high levels of sensory and cognitive skills (Rosen and Jerdee 1985: 24).

Similarly, one may deduce that health deteriorates with age, leading to higher absenteeism among older workers. In this regard, Rosen and Jerdee (1985: 27) presented evidence to show that both older workers and younger workers reported the same level of "avoidable absences." However, older workers were more likely to experience higher levels of "unavoidable absences" than younger workers. They concluded that the greater loss in time due to illness could be reflecting biological differences (e.g., older workers take longer to recover from an injury). On a similar note, Dillingham (1981: 4) reported that, on average, older workers lost more days for injuries than younger workers.

The two previous stereotypes relate to physiological aspects of older workers. Stereotypes also stem from business decisions. Employers often rationalize that it is not financially viable to employ older workers because they will only stay for a short period of time in the labour force. The validity of this argument is undermined by findings which showed that older workers value their work more than younger workers, that they are less likely to quit, and that they are more likely to be committed to the organization (Doering, Rhodes, and Schuster 1983). Another stereotype related to a business decision is associated with the view that older workers are difficult or unwilling to retrain. On the one hand, Rosen and Jerdee (1985: 29) rejected this view on the grounds that many older individuals

attended institutions of higher education. On the other hand, Tindale (1991: 23) reported that problem-solving skills are negatively associated with age, perhaps because systemic barriers (e.g., the colour of a computer screen can affect reading speed) may determine the adoption of retraining opportunities.

The negative stereotypes function in different ways to restrict employment opportunities for older workers. That employment opportunities are limited among older workers is substantiated by empirical evidence. In this regard, Hutchens (1988: 98) examined the distribution of recently hired old workers by industry and occupation and found that "[...] recently hired old workers were less equally distributed across industries and occupations than both recently hired younger workers and all old workers." Moreover, Coberly (1988: 14) indicated that even a subsidy or tax credit may not be enough to induce employers to hire older workers.

Proposition 1: As a result of negative stereotypes, older workers are likely to face disadvantaged labour-market positions. Or fewer employment opportunities are likely to exist for older workers. And they are more likely to become discouraged about future employment prospects. Thus, we expect that older workers are more likely to be affected by the discouraged-worker effect.

Proposition 2: In terms of plant closings, the "old job" provided a sense of security. And stereotypes work against employment opportunities for older workers. The lack of employment opportunities is likely to leave the worker with a sense of having been betrayed by the employer, which may carry forward to subsequent employment situations. Thus, we expect a positive relationship between workers' age and the poisoning effect.

Proposition 3: Stereotypes of older workers as less suited for the primary labour market do not bode well for career growth after job loss from plant closures. Therefore, we expect a negative relationship between the career-growth effect and older-worker status.

METHODOLOGY

Data Source

In 1982, the Plant Closure Review and Employment Adjustment Branch of the Ontario Ministry of Labour surveyed 2,500 individuals who had lost their jobs in 21 companies that had closed in Southern, Central, and Eastern Ontario (Canada). The Ministry received completed or partially completed questionnaires from 1,736 individuals. In 1992, we verified the addresses of approximately 1,300 of the 1,736 respondents and administered a follow-up mailed questionnaire. This was a very labour-intensive undertaking which

included a comparison of each name and address on the frame to up-to-date phone books and street directories. The same individuals were re-surveyed in an attempt to gain a long-term perspective on the adjustment issues. Furthermore, the group of individuals in our sampling frame is very typical of the plant-closing population (e.g., older, unskilled, less educated, and non-mobile). This group of workers has presented policy makers with a high degree of challenge in terms of adjustment issues.

Despite our effort (e.g., cover letter, collect call to clarify concerns, self-addressed stamped return envelope, pre-notification card, and reminder postcard), only 387 individuals responded to the questionnaire. Reflected in this somewhat low response rate was a conscious choice to respect the desire of those who did not want to participate as a result of the stress which surrounded the transition period. In addition, a number of the respondents from the original survey had passed away, and efforts to pursue a response from family members would have been insensitive. The sample size was further reduced to 242 individuals because of missing data, which could not be imputed by mean substitution. We compared the responses on a number of key variables for the 1,300 potential respondents and the 387 who responded to the survey. This comparison revealed that there were some minor differences for the respondents — fewer women, better educated, older, part-time workers, and more white-collar workers. The interpretation of the results must, therefore, reflect these differences.

Measuring the Discouraged-Worker Effect

The measurement of the discouraged-worker effect is clearly associated with the decision to withdraw from the labour market because of the belief that no jobs are available (Stevens, Register, and Grimes 1987). As such, the respondents were asked to answer either “no” or “yes” to the following question: “[w]hile you were unemployed, was there ever a period of time when you gave up looking for work because you believed no jobs were available?” The respondents who answered “yes” were considered to be discouraged.

Proposition 1 outlines the expected relationship between the discouraged-worker effect and older-worker status. But other individual and labour market reasons underlie the discouraged-worker effect (Akyeampong 1987). Female workers often find themselves in a disadvantaged labour market position because of discrimination, and therefore they are more likely to report the discouraged-worker effect. Base education and post-closure training activities are regarded as human capital factors which enhance one's position in the labour market. As such, the respondents with any level of education above the elementary level and those who undertook post-closure training activities are less likely to experience the discouraged-worker effect. On the one

hand, individuals who decide to stay in their communities have in effect limited the number of choices available to them. This would lead one to predict that the discouraged-worker effect should be observed sooner and be of greater duration than for individuals who are more flexible in terms of where they live. On the other hand, those who stay may be in a better position to draw upon family and community resources or may be willing to accept a lower wage level in order to stay in the community, which may lead to the prediction that the discouraged-worker effect would occur with less frequency and be of shorter duration. Married respondents, those who remained in the neighborhood, and the individuals who owned a home at the time of the plant closures are all more likely to be less mobile, and therefore they are more likely to report the discouraged-worker effect. We also controlled for various labour market factors without any strong *a priori* expectations.

Measuring the Poisoning Effect

The poisoning effect is associated with three characteristics (Latack and Dozier 1986; Fineman 1983). In order to capture these characteristics, the respondents were asked to indicate their agreement (on a four-point Likert-type scale) on the following four statements: (1) "[t]he jobs I have held since the plant closed have not required me to use a high level of skills;" (2) "[t]he job I had at the closed plant was more satisfying than any job I have had since;" (3) "[c]ompared to the job I had at the closed plant, I have not felt the same level of involvement in any work at the jobs that I have had since;" and (4) "I am far less trusting of employers since losing my job to a plant closing." We created a scale of the poisoning effect by adding the scores of the four items for each respondent in the sample (Cronbach Alpha = 0.69).

Proposition 2 highlights the expected relationship between the poisoning effect and older-worker status. Other demographic and human capital, mobility, and work-related factors can also affect the poisoning effect. Both base education and post-closure training activities work in the same direction toward subsequent employment and, by extension, the likelihood of less "bitterness" to employers on the whole. In addition, employment with the closed employer is complementary to factors which indicate the desire for less mobility (married, remained in neighborhood, and home ownership). Plant closures may, therefore, induce negative feelings for the employer which may carry forward to subsequent employment relationships. Subsequent unemployment spells are likely to reinforce the negative attitude, which may heighten the "bitterness." We had no *a priori* expectation regarding the relationships between the poisoning effect and either gender or the number of full-time and part-time employers.

Measuring the Career-Growth Effect

The measurement of the career-growth effect is also related to multiple items, in which the respondents were asked to indicate their agreement on the following two items (on a four-point Likert-type scale): (1) "I am better off now than I would have been had I stayed at my old job;" and (2) "[j]obs I have held since the plant closing have had more opportunities for promotion than my old job at the closed plant." The scores on the two items were added for each individual to create a scale for the career-growth effect (Cronbach Alpha = 0.70).

Proposition 3 outlines the expected relationship between the career-growth effect and older-worker status. Female workers are also more likely to find themselves in a disadvantaged labour market because of discrimination, and therefore they are less likely to report the career-growth effect. In contrast, base education and post-closure training activities are positively correlated with human capital which may lead to career growth (Stumpf 1982; Hepworth 1980; Jahoda 1981). Home ownership is likely to be tied to a mortgage which may induce career growth. But being married and the choice to stay in the neighborhood may limit mobility to locations which provide opportunities for career growth. Unemployment spells imply a labour market with fewer opportunities for career growth. We have no *a priori* expectations of the relationships between the career-growth effect and the number of full-time and part-time employers.

Data Analysis

After we reported the descriptive results, we examined the bivariate relationships between the discouraged-worker, poisoning, and career-growth effects and the three age groups (below 45, 45–55, and above 55). Multiple regression analysis was then used to determine the relationships between the three effects and older-worker status (45–55 and above 55), after controlling for other individual and human capital, mobility, and work-related characteristics. An additional set of multiple regression analysis was used to examine whether post-closure training activities affected the relationships between the effects and older-worker status. Last, we investigated the relationships between the discouraged-worker, poisoning, and career-growth effects and subsequent employment status.

RESULTS

Table 1 summarizes the descriptive statistics for the dependent variables (the discouraged-worker, poisoning, and career-growth effects) and the independent variables (age, other demographic and human capital,

TABLE 1
Means and Standard Deviations for the Dependent and Independent Variables

<i>Variables</i>	<i>Means</i>	<i>Standard Deviations</i>
<i>Dependent Variables</i>		
Discouraged-Worker Effect (yes=1)	0.20	0.40
Poisoning Effect (scale, 4-16)	10.08	3.20
Career-Growth Effect (scale, 2-8)	4.40	1.95
<i>Independent Variables</i>		
<i>Demographic Variables</i>		
Age [Below 45]	0.66	0.48
45-55	0.19	0.39
Above 55	0.15	0.36
Married (yes=1)	0.80	0.40
Female (yes=1)	0.34	0.48
<i>Human Capital Variables</i>		
Education [Elementary]	0.52	0.50
High School	0.26	0.44
Vocational Training	0.13	0.33
University Education	0.09	0.29
Post-Closure Training (yes=1)	0.22	0.41
<i>Mobility Variables</i>		
Remained in Neighborhood (yes=1)	0.97	0.18
Owned Home at Time of Closure (yes=1)	0.76	0.43
<i>Work-Related Variables</i>		
Number of Full-Time Employers	2.82	10.88
Number of Part-Time Employers	2.19	12.62
Unemployment Spell (yes=1)	0.86	0.35

Number of observations = 242 and square brackets indicate reference categories for subsequent multivariate analysis.

mobility, and work-related variables). Twenty percent of the respondents reported the discouraged-worker effect. The average score for the poisoning effect was 10.08 (range from 4 to 16), and that for the career-growth effect was 4.40 (range from 2 to 8). Sixty-six percent of the respondents were less than 45 years old, 19 percent were 45-55 years old, and 15 percent were above 55 years old. The sample consisted of 80 percent married individuals and 34 percent females. The majority of the respondents (52 percent) were educated at the elementary level. Twenty-two percent of the respondents indicated post-displacement training activities. Ninety-seven percent

of the respondents remained in the neighborhood, and 76 percent owned a home at the time of the plant closure. The average number of full-time employers was 2.82, and part-time employers was 2.19. Finally, 86 percent of those displaced from the plant closures experienced an unemployment spell.

Table 2 shows the bivariate relationships between the discouraged-worker, poisoning, and career-growth effects and the three age groups. Although older workers are more likely to exhibit a discouraged-worker effect, the relationship is not statistically significant at conventional levels. The poisoning effect is positive for the below-45 age group, and negative for the 45-55 and especially the above-55 age groups. In addition, the career-growth effect is negative for the below-45 age group, and positive for the 45-55 group and especially the above-55 age group. Generally, the bivariate relationships do not support the propositions. Older workers are not more likely to be discouraged from seeking further work; they are less likely to exhibit a poisoned attitude to their new situations; and they are more likely to report positive career-growth changes in their new situations.

TABLE 2

Bivariate Relationships Between the Employment Effects and Age Groups

<i>The Employment Effects</i>	<i>Age Groups</i>		
	<i>Below 45</i>	<i>45-55</i>	<i>Above 55</i>
1. % Not Discouraged	80.5	80.4	78.4
% Discouraged	19.5	19.6	21.6
Total	159	46	37
$\chi^2 = 0.09$, d.f. = 2, and $p = 0.96$			
2. Poisoning Effect	0.24***	-0.11*	-0.20***
3. Career-Growth Effect	-0.34***	0.16**	0.27***

Number of observations = 242, *** $p < .01$, ** $p < .05$, and * $p < .10$.

These results hold up in the multiple regression analysis, which controls for the effect of other variables (Table 3). Specifically, the logistic regression results (column 1) indicate that the probability of reporting a discouraged-worker effect is not significantly related to age. The only statistically significant determinants of the discouraged-worker effect are the work-related variables. For example, the respondents who worked with a higher number of full-time employers were less likely, and the individuals who worked with a higher number of part-time employers were more likely to report the discouraged-worker effect.

TABLE 3
Multiple Regression Analysis of the Discouraged-Worker, Poisoning,
and Career-Growth Effects

<i>Independent Variables</i>	<i>Discouraged- Worker Logit Estimates (s.e.)</i>	<i>Poisoning Effect OLS Estimates (t-statistics)</i>	<i>Career-Growth Effect OLS Estimates (t-statistics)</i>
<i>Demographic Variables</i>			
Age [Below 45]			
45-55	0.50 (0.49)	-0.89 (1.55)	0.92 (2.78)***
Above 55	0.84 (0.67)	-1.28 (1.66)*	1.49 (3.32)***
Married	0.01 (0.55)	0.36 (0.59)	-0.15 (0.43)
Female	0.15 (0.37)	-0.21 (0.49)	-0.38 (1.53)
<i>Human Capital Variables</i>			
Education [Elementary]			
High School	-0.42 (0.45)	-0.05 (0.10)	-0.14 (0.49)
Vocational Training	-0.57 (0.62)	-1.40 (2.21)***	0.61 (1.66)*
University Education	-0.45 (0.74)	-0.99 (1.25)	0.52 (1.14)
Post-Closure Training	-0.37 (0.49)	-0.89 (1.75)*	0.34 (1.16)
<i>Mobility Variables</i>			
Remained in Neighborhood Owned Home at Time of Closure	1.02 (1.18)	2.16 (1.92)*	-1.29 (1.96)**
	0.25 (0.54)	0.09 (0.15)	0.08 (0.22)
<i>Work-Related Variables</i>			
Number of Full-Time Employers	-0.21 (0.10)**	0.05 (1.39)	-0.01 (0.06)
Number of Part-Time Employers	0.22 (0.10)**	-0.05 (1.55)	0.001 (0.09)
Unemployment Spell	1.01 (0.64)	1.42 (2.54)***	-1.33 (4.08)***
Constant	-3.36 (1.52)**	7.29 (5.06)***	6.43 (7.68)***
-2*Log Likelihood Ratio	223.41	N/A	N/A
R-Square	N/A	0.16	0.24
F-Value	N/A	3.42***	5.45***
Number of Observations	242	242	242

*** p < .01, ** p < .05, * p < .10 and square brackets indicate reference categories.

In the second column of Table 3, the OLS estimates of the poisoning effect indicate that the respondents above 55 years old were less likely to report the poisoning effect than were those who were below 45 years old. The relationships between the poisoning effect and the control variables are

largely as expected. Respondents with prior vocational training and with post-closure training were less likely to report the poisoning effect. Respondents who remained in their neighborhoods were more likely to report the poisoning effect, as were those who reported an unemployment spell.

OLS estimates of the career-growth effect (column 3) indicate that older workers are more likely to report positive attitudes with respect to career growth after displacement. The signs on the control variables are largely as expected. For example, vocational training had a positive impact on career growth relative to elementary level education. And the respondents who remained in their neighbourhoods and those who experienced an unemployment spell were less likely to experience career growth after plant closures.

Table 4 reports the results of an investigation of the effect of post-closure training activities on the relationship between the discouraged-worker, poisoning, and career-growth effects and older-worker status. The discouraged-worker logit estimates indicate that the respondents who did not undertake post-closure training activities from the 45–55 age group were more likely to report discouragement than those less than 45 years old. The conclusion is that post-closure training activities reduced the likelihood of discouragement among the 45–55 age group. In contrast, it is clear that respondents from the older age groups who did not undertake post-closure training activities were less likely to experience the poisoning effect and more likely to experience the career-growth effect.

Table 5 reports the bivariate relationships between subsequent employment status and the discouraged-worker, poisoning, and career-growth effects. It suggests that the individuals who reported an initial discouraged-worker effect were more likely to be subsequently unemployed or discouraged than those who did not report an initial discouraged-worker effect. The poisoning effect was negatively correlated with subsequent employment and positively correlated with unemployment and discouragement. In conclusion, the career-growth effect was positively related to employment and negatively related to unemployment and discouragement.

DISCUSSION AND IMPLICATIONS

The results are surprising on two fronts. First, in contrast to the *a priori* expectations, older workers were no more likely to report a discouraged-worker effect; and they were less likely to report the poisoning effect and more likely to report the career-growth effect. We see three possible explanations for these relationships. The traditional definition of older workers is 65 years old. It should be noted that both the 45–55 and especially the above-55 age groups are increasingly being regarded as the “new cadre”

TABLE 4
Multiple Regression Analysis of the Discouraged-Worker, Poisoning, and Career-Growth Effects by Post-Closure Training Activities

Independent Variables	Discouraged-Worker Logit Estimates (s.e)		Poisoning Effect OLS Estimates (t-statistics)		Career-Growth Effect OLS Estimates (t-statistics)	
	Trained	Not Trained	Trained	Not Trained	Trained	Not Trained
<i>Demographic Variables</i>						
Age [Below 45]						
45-55	-1.65 (1.92)	1.03 (0.57)*	0.12 (0.10)	-1.23 (1.81)*	0.18 (0.23)	1.00 (2.63)***
Above 55	21.47 (158.10)	0.50 (0.81)	-0.92 (0.57)	-1.01 (1.08)	1.71 (1.60)	1.18 (2.26)***
Married	-9.15 (67.05)	-0.28 (0.63)	0.08 (0.06)	0.54 (0.76)	-0.34 (0.38)	-0.21 (0.52)
Female	1.25 (2.06)	0.25 (0.41)	-1.74 (1.78)*	0.21 (0.42)	0.67 (1.04)	-0.34 (1.24)
<i>Human Capital Variables</i>						
Education [Elementary]						
High School	17.88 (179.40)	-1.09 (0.55)**	0.87 (0.62)	-0.08 (0.16)	0.31 (0.34)	-0.15 (0.47)
Vocational Training	14.71 (179.40)	-0.89 (0.81)	0.68 (0.48)	-2.20 (2.82)***	0.63 (0.66)	1.09 (2.52)***
University Education	0.24 (183.70)	-0.60 (0.95)	-0.50 (0.34)	-0.55 (0.51)	-0.05 (0.05)	0.76 (1.28)
<i>Mobility Variables</i>						
Remained in Neighborhood	15.16 (431.70)	0.65 (1.29)	0.16 (0.06)	3.22 (2.42)***	-1.70 (1.03)	-1.45 (1.95)**
Owned Home at Time of Closure	32.63 (194.50)	0.07 (0.58)	0.86 (0.60)	-0.06 (0.08)	0.65 (0.68)	-0.13 (0.33)
<i>Work-Related Variables</i>						
Number of Full-Time Employers	0.83 (0.89)	-0.33 (0.11)***	0.11 (0.33)	0.05 (1.36)	-0.07 (0.35)	-0.01 (0.45)
Number of Part-Time Employers	1.89 (1.01)*	0.33 (0.11)***	-0.14 (0.30)	-0.05 (1.50)	0.56 (1.79)*	-0.002 (0.11)
Unemployment Spell	10.61 (162.5)	0.80 (0.67)	1.16 (0.91)	1.33 (2.08)***	-0.90 (1.06)	-1.36 (3.81)***
Constant	-69.49 (513.60)	-2.27 (1.62)	7.46 (2.38)***	6.25 (3.67)***	7.18 (3.46)***	6.78 (7.15)***
-2*Log Likelihood Ratio	15.21***	178.09*	N/A	N/A	N/A	N/A
R-Square	N/A	N/A	0.20	0.16	0.25	0.26
F-Value	N/A	N/A	0.85	2.81***	1.08	5.13***
Number of Observations	53	189	53	189	53	189

*** p < .01, ** p < .05, * p < .10 and square brackets indicate reference categories.

TABLE 5
 Bivariate Relationships Between Current Employment Status
 and the Employment Effects

<i>The Employment Effects</i>	<i>Employment Status</i>		
	<i>Employed</i>	<i>Unemployed</i>	<i>Discouraged</i>
4. % Not Discouraged	83.8	68.4	73.6
% Discouraged	16.2	31.6	26.4
Total	167	19	53
$\chi^2 = 4.53^*$, d.f. = 2, and $p = 0.10$			
5. Poisoning Effect	-0.20***	0.02	0.18***
6. Career-Growth Effect	0.28***	-0.15**	-0.21***

Number of observations = 242, *** $p < .01$, ** $p < .05$, and * $p < .10$.

of older workers (CARNET 1995). Nevertheless, the 45–55 and above-55 years old groups may not be disadvantaged by the stereotypes which lead to a disadvantaged labour market position, and as such are less likely to report the poisoning effect and more likely to report the career-growth effect.

Similarly, age is positively correlated with experience and general knowledge — aspects of human capital that are not measured here. According to Kletzer (1991), such human capital can be transferred into the general labour market and in turn reduce the negative consequences of plant closures. If the 45–55 and above-55 age groups are considered to have such human capital, then it becomes clearer why they reported a negative relationship with the poisoning effect and a positive relationship with the career-growth effect.

The final set of reasons for the unexpected relationships between the poisoning effect as well as the career-growth effect and older-worker status is related to the value of community support. The two older cohorts are more likely to be “tied” to other positive aspects of the community. In other words, employment at the closed plant accounted for one aspect of their lives. Such workers are more likely to use their “connections to the community” to mitigate the negative effects of plant closures. One may argue that workers who are otherwise tied to the community may find ways to justify the plant closure (less likely to be “bitter” at employers) and “move on” to another career (more likely to report career growth).

The second surprising result is that post-closure training activities did not reduce the level of poisoning effect and increase the level of career-growth effect among the two older groups of workers. The surprise is related to the view that training has the ability to enhance human capital,

which should open-up employment opportunities, reduce the level of "bitterness" towards employers, and increase the likelihood of career growth. On the other hand, post-closure training may induce a greater degree of "bitterness" if it does not translate into a "suitable" job. The likelihood of this outcome is increased if displaced workers are "forced" into training programs which are not appropriate for the job market. Inappropriate training programs are also less likely to lead to career growth.

Older workers are likely to become a valuable source of labour in the near future and hence it is desirable to remove stereotypes as well as barriers to facilitate a full integration of these workers (Singh 1998). In this regard, stereotypes may prevent employers from seeking older workers after plant closures. Our results indicated that older workers are no more likely to report a discouraged-worker effect, less likely to report the poisoning effect, and more likely to report the career-growth effect. There is therefore no reason for employers to believe that older workers would not adjust to plant closures. In fact, employers could use age as a proxy for "successful" adjustment to plant closures.

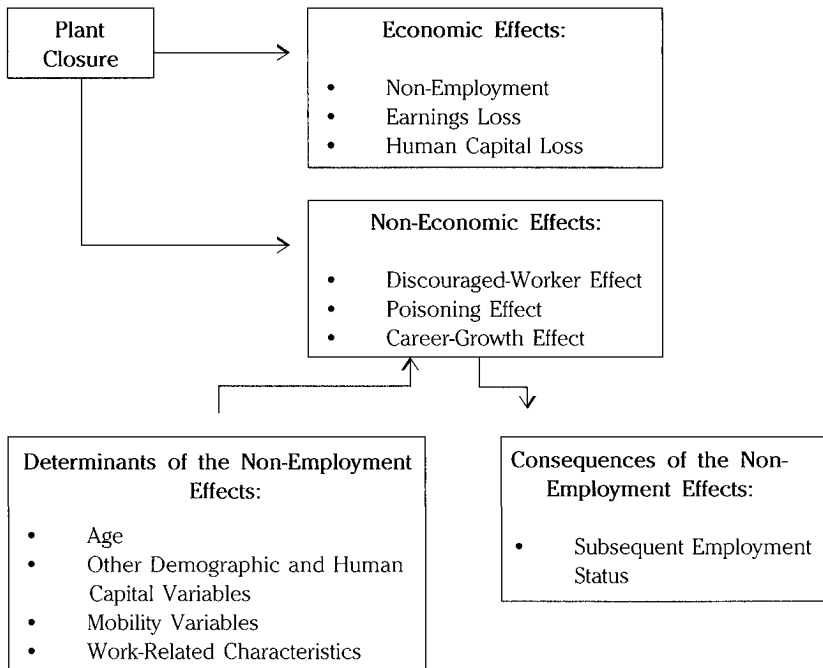
Jahoda (1981) appropriately argued that post-closure training activities are a structured substitute for the workplace that may translate into career growth. In other words, opportunities abound in retraining programs for feedback, support, and feelings of accomplishment. However, as in any work situation, failure and frustration may be encountered, and the effect of this cannot be overlooked. Our results indicated that post-closure training activities did not reduce the poisoning effect or enhance the career-growth effect. The implication is not that post-closure training activities are harmful, but instead that it is appropriate to design training activities so that they lead to less failure and frustration. For example, the content of the training program must be directed at the achievement of psychologically and economically fulfilling jobs.

Initial discouragement is positively associated with unemployment and subsequent discouragement. The poisoning effect is negatively correlated with employment and positively correlated with discouragement. And the career-growth effect is positively related to employment and negatively related to both unemployment and discouragement. The implication is that the reduction of the discouraged-worker and poisoning effect and the promotion of the career-growth effect have positive long-term employment outcomes. This highlights the importance of designing training programs so that they lead to the desirable employment outcomes.

Figure 1 outlines a framework to assess the consequences of plant closures. Discouraged-worker, poisoning, and career-growth effects are identified as non-economic employment outcomes. The framework suggests that the outcomes are potentially affected by age, other individual and human

capital characteristics, mobility factors, and work-related variables. Also, the framework proposes that there is an association between the outcomes and subsequent employment status. We have provided preliminary evidence which substantiates the validity of the framework. Our data is moderately dated and the sample size is relatively small. We therefore encourage further development and verification of the framework.

FIGURE 1
Framework of the Consequences of Plant Closures



In the near future, the interaction of the aging population and the desire of organizations to operate with a reduced number of workers will likely raise a number of questions in terms of retirement, bridge employment, and the need to encourage older workers to remain in the labour force. Our results suggest that older workers are a resilient and competent source of labour, who have the ability to adjust to adverse employment conditions. It is important not to allow stereotypes to cloud our judgement on later-life labour force behaviour.

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RÉSUMÉ

Travailleurs âgés et fermetures d'usine

Que la population canadienne vieillisse à un taux accéléré ne fait aucun doute. Parallèlement à ce phénomène, plusieurs organisations ont choisi une stratégie qui vise à faire plus avec moins. Elles peuvent réduire leur personnel de plusieurs façons : les mises à pied, les licenciements et les fermetures. Ici, nous examinons comment réagissent les travailleurs âgés aux fermetures d'usines.

Les travailleurs qui perdent leur emploi suite à une fermeture d'usine sont considérés comme licenciés. Ils peuvent réagir à un licenciement de plusieurs façons. Premièrement, un tel événement peut les inciter à se retirer du marché du travail (« effet de découragement »). L'effet de découragement décrit ces personnes sans emploi, qui accepteraient un emploi disponible mais qui ont cessé d'en chercher un croyant qu'il n'y en a aucun. Deuxièmement, les travailleurs licenciés peuvent travailler pour un autre employeur tout en gardant envers les employeurs en général une attitude négative. Essentiellement, c'est l'« effet poison » qui décrit ces individus qui rejettent sur les autres employeurs leur mauvaise expérience de fermeture. Cet effet poison peut causer des dommages permanents aux relations d'emploi d'un individu. Pour certains, surtout ceux en période de mi-carrière tardive, la perte d'un emploi représente une perturbation permanente de carrière dont ils ne se relèveront jamais. Ceci se traduit par des sentiments d'incertitude eu égard à leur situation d'emploi, par une moindre implication dans leur travail et du cynisme qu'on conservera au moins jusqu'à l'emploi suivant. Troisièmement, l'« effet de croissance de la carrière » réfère à ces individus qui, ayant perdu leur emploi, se retrouvent dans une relation d'emploi plus intéressante et satisfaisante. La perte d'un

emploi est sans aucun doute une source de stress. Mais de tels événements peuvent être une cause de croissance amenant les individus à considérer de nouveaux chemins, à acquérir de nouvelles compétences et à restructurer leur vie dans des directions positives. La croissance de la carrière vue sous cet angle signifie plus que survivre à un licenciement et trouver un autre emploi. Cela signifie trouver un autre emploi psychologiquement satisfaisant et conclure que les gains résultant de cette transition d'emploi sont plus grands que les pertes.

Notre thèse est à l'effet que les travailleurs âgés s'ajustent aux fermetures d'usines de façon différente des plus jeunes tant en termes d'effet de découragement, d'effet poison que d'effet de croissance de carrière. Selon les théories structurelles de l'inégalité, les caractéristiques démographiques, telles l'âge, la race et le sexe sont des critères importants sur le marché du travail. Et pour plusieurs raisons, les chances d'emploi sont plus limitées pour les travailleurs âgés. Les barrières à l'emploi pour les plus vieux sont dues tant à ceux-ci qu'aux employeurs. Par exemple, les employeurs font preuve d'attitudes qui affectent négativement les chances d'emploi des plus vieux : ils sont moins productifs que les plus jeunes, ils ont un plus taux d'absentéisme que les plus jeunes, ils représentent un mauvais investissement vu le peu de temps qui leur reste à travailler, et ils sont difficiles à recycler ou réticents au recyclage.

Proposition 1. La résultante de ces stéréotypes négatifs est que les travailleurs plus âgés ont une position désavantagée sur le marché du travail. Ou encore, il existe moins de chance d'emploi pour les plus vieux. Ainsi ils auront tendance à devenir plus découragés eu égard à leurs chances futures d'emploi. Nous nous attendons donc à ce que les travailleurs plus âgés fassent preuve d'une plus grande probabilité d'effet de découragement.

Proposition 2. Dans le contexte d'une fermeture d'usine, l'ancien emploi représentait la sécurité. Et les stéréotypes nuisent aux chances d'emploi des plus vieux. Cette carence d'emploi peut très bien causer un sens de trahison de la part des employeurs en général, sentiment qu'on gardera pour l'avenir. Ainsi les travailleurs plus âgés sont plus sujets à l'effet poison.

Proposition 3. Ces stéréotypes à l'effet que les travailleurs plus âgés s'adaptent mal au marché primaire du travail ne sont pas de bonne augure pour la croissance de la carrière après une perte d'emploi suite à une fermeture. Nous nous attendons donc à une relation négative entre l'effet de croissance de la carrière et le statut de travailleur plus âgé.

En 1982, le ministère ontarien du travail a enquêté 2 500 individus licenciés de 21 entreprises situées dans le sud, le centre et l'est de l'Ontario. Le ministère a alors reçu 1 736 questionnaires complets ou partiels. En 1992, nous avons vérifié les adresses d'environ 1 300 de ces 1 736 répondants

et leur avons envoyé un questionnaire de suivi par la poste. Malgré nos efforts, seulement 387 individus nous ont répondu. L'échantillon fut réduit à 242 suite à des données manquantes non substituables par des moyennes.

La mesure de l'effet de découragement est clairement reliée à la décision de se retirer du marché du travail suite à la croyance qu'aucun emploi n'est disponible. Ainsi, nous avons demandé aux répondants de répondre par oui ou non à la question suivante : « Pendant votre période de chômage, fut-il un temps où vous avez cessé de chercher du travail parce que vous croyiez qu'aucun emploi n'était disponible ? » Les répondants positifs furent considérés comme découragés.

L'effet poison est associé à trois caractéristiques. Dans le but de mesurer ces caractéristiques, nous avons demandé aux répondants d'indiquer leur degré d'accord (avec une échelle de type Likert) à quatre énoncés : « (1) les emplois que j'ai eus depuis mon licenciement ne m'ont pas obligé à utiliser un haut niveau de qualification, (2) l'emploi que j'ai perdu était plus satisfaisant que tous ceux que j'ai eus depuis, (3) comparativement à l'emploi que j'ai perdu, je n'ai jamais ressenti le même niveau d'implication dans aucun emploi, (4) j'ai beaucoup moins confiance aux employeurs depuis mon licenciement ». Nous avons créé une échelle de l'effet poison en additionnant les résultats de ces quatre items pour chaque répondant de l'échantillon (alpha de Cronbach = 0.69).

La mesure de l'effet de la croissance de la carrière dépend aussi de plusieurs caractéristiques. Nous avons demandé, dans la même perspective que l'effet précédent, de répondre à deux énoncés : « (1) je suis mieux maintenant que dans mon ancien emploi, (2) les emplois que j'ai eus depuis mon licenciement comportent plus de chances de promotion que mon ancien emploi ». Les résultats sur ces deux énoncés furent additionnés pour chacun (alpha de Cronbach = 0.70).

Nous avons utilisé l'analyse de régression multiple pour déterminer la relation entre l'effet de découragement, l'effet poison, l'effet de la croissance de la carrière et le statut de travailleur plus âgé (45-55 ans et 55 ans et plus) après avoir contrôlé d'autres caractéristiques reliées à l'emploi, aux individus, au capital humain et à la mobilité.

L'analyse de régression logistique indique que la probabilité de déclarer un effet de découragement n'est pas reliée de façon significative avec l'âge. Nos estimations de l'effet poison démontrent que les répondants de plus de 55 ans sont moins sensibles à l'effet poison que ceux âgés de moins de 45 ans. Et nos estimations de l'effet de la croissance de la carrière indiquent que les travailleurs plus âgés ont plus tendance à démontrer des attitudes positives eu égard à la croissance de leur carrière après le licenciement.

Ces résultats sont surprenants à deux égards. D'abord, contrairement à nos attentes *a priori*, les travailleurs âgés ne sont pas plus enclins à l'effet de découragement, rapportent moins l'effet poison et sont plus susceptibles de rapporter un effet positif de la croissance de la carrière. Nous voyons trois explications possibles. La définition traditionnelle de « travailleur âgé » est de 65 ans. Notons cependant que tant le groupe de 45-55 ans que surtout les 55 ans et plus sont de plus en plus considérés comme les nouveaux travailleurs âgés. Néanmoins les 45-55 et ceux âgés de plus de 55 ans peuvent ne pas être désavantagés par les stéréotypes qui mènent à une expérience négative sur le marché du travail. Ainsi, ils sont moins sujets à l'effet poison et plus à même de rapporter un effet de croissance de la carrière.

Il y a une corrélation positive entre l'âge, l'expérience et les connaissances générales. Tel capital humain peut se voir transféré sur le marché général du travail et ainsi réduire les effets négatifs d'une fermeture. Si nous considérons les 45-55 ans et ceux âgés de plus de 55 ans comme détenant ce capital humain, nous comprenons pourquoi ils rapportent un effet négatif à l'effet poison et un effet positif à l'effet de croissance de la carrière.

Finalement, nous expliquons aussi nos résultats par la valeur du support communautaire. Il y a tout probablement des liens serrés entre ces deux cohortes les plus vieilles et la communauté. Certes l'emploi perdu était un aspect de leur vie, mais ces travailleurs sont plus susceptibles d'utiliser leurs liens avec la communauté pour mitiger les effets négatifs d'une fermeture, allant même jusqu'à pouvoir justifier la fermeture et progresser dans une nouvelle carrière.

Les travailleurs plus âgés sont appelés à devenir une source de travail de valeur dans le proche avenir. Il est alors souhaitable de se débarrasser des stéréotypes et autres barrières les touchant pour faciliter leur intégration entière. Nos résultats indiquent que les travailleurs plus âgés ne sont pas plus sujets à l'effet de découragement, rapportent moins d'effet poison et sont plus touchés par l'effet de croissance de la carrière. Ainsi, il n'y a aucune raison à l'appui de cette croyance des employeurs que les travailleurs plus âgés ne s'ajusteront pas à une fermeture. En fait, les employeurs pourraient utiliser l'âge comme indicateur de succès de l'adaptation aux fermetures d'usine.