

The Production of Flexible Attitudes in the Canadian Pulp and Paper Industry

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Volume 54, numéro 3, 1999

URI : <https://id.erudit.org/iderudit/051255ar>

DOI : <https://doi.org/10.7202/051255ar>

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Éditeur(s)

Département des relations industrielles de l'Université Laval

ISSN

0034-379X (imprimé)

1703-8138 (numérique)

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Citer cet article

Smith, M. R. (1999). The Production of Flexible Attitudes in the Canadian Pulp and Paper Industry. *Relations industrielles / Industrial Relations*, 54(3), 581–608. <https://doi.org/10.7202/051255ar>

Résumé de l'article

Un argument veut qu'une clause de sécurité d'emploi améliorera probablement la productivité de deux grandes façons. D'abord, à l'intérieur de l'organisation, les employés non inquiets quant à l'avenir de leurs emplois auront plus tendance à faire confiance à leurs employeurs et à coopérer lors de l'implantation de changements techniques, incluant la réorganisation du travail. De façon opposée, les employés craignant leur mise à pied ou leur licenciement déploieront des efforts considérables pour se protéger dans de telles situations. Ils chercheront à établir des marchés internes de travail qui limitent la discrétion de l'employeur de plusieurs façons comme, par exemple, l'établissement de règles d'ancienneté appliquées de façon rigide en cas de promotions et de mises à pied ou licenciements. Ensuite, à la lumière de l'expérience suédoise, on prétend que les employés qui ont une sécurité d'emploi opposent moins de résistance à la restructuration industrielle et même la favorisent.

On présente deux sortes de preuves au soutien de l'idée que la sécurité d'emploi accroît la flexibilité efficiente à l'intérieur des entreprises. D'abord, on compare la performance économique générale de ces pays où l'on retrouve plus ou moins de sécurité d'emploi, en particulier l'Amérique du Nord et le Royaume-Uni versus l'Allemagne, le Japon et la Suède. Ensuite, il existe des études de cas d'entreprises nord-américaines qui accordent la sécurité d'emploi et dont on croit qu'elles performant mieux que la moyenne. Mais aucun de ces deux types de preuve n'est satisfaisant. Les comparaisons de performance macroéconomique entre pays sont hautement indirectes.

Les études de cas, pour leur part, sont très anecdotiques. L'hypothèse de l'effet de la sécurité d'emploi sur la restructuration est surtout basée sur l'expérience suédoise. Mais jamais n'a-t-on présenté de preuve de l'enthousiasme des Suédois pour la restructuration.

Nous utilisons ici un ensemble de données qui permet une vérification plus directe des effets de la sécurité d'emploi sur les attitudes eu égard à la flexibilité. Comme partie de l'Étude sur la population active de 1992, 552 employés de l'industrie canadienne des pâtes et papier furent interviewés sur leurs expériences de mise à pied, sur leur degré d'insécurité perçue envers leurs emplois, sur la qualité de leurs relations du travail et sur leurs attitudes envers le changement technologique, les coupures salariales pour préserver les emplois, la concurrence internationale et la nécessité de subventions pour sauver des emplois. Ces données contiennent également une information détaillée sur les occupations qui varient selon que les qualifications qui y sont attachées sont transférables. Dans l'industrie du papier, il est probable que les gestionnaires, les professionnels et les employés d'entretien possèdent des qualifications qui sont en demande par d'autres employeurs, incluant des employeurs en dehors de leur propre industrie.

Les opérateurs, pour leur part, travaillent à l'intérieur de lignes rigides de progression rendant leurs qualifications moins transférables. Les employés de centrales d'énergie sont à mi-chemin en ce qu'ils travaillent également à l'intérieur de lignes de progression mais détiendraient normalement une carte de compétence qui leur conférerait une certaine transférabilité. Telle transférabilité de qualification peut être considérée comme une autre source de sécurité d'emploi.

Nous avons analysé les données en utilisant la régression hiérarchique destinée à vérifier la présence de séquences d'effets. Ainsi, par exemple, cette méthode vérifie la présence d'un effet résiduel de la sécurité d'emploi sur les attitudes envers la flexibilité à travers la qualité des relations du travail et le degré de confiance envers les employeurs.

Nos principaux résultats sont : (1) ni l'expérience de la mise à pied ni la probabilité d'être mis à pied ou de devenir chômeur n'a d'effet direct ou indirect sur les attitudes de flexibilité; (2) les perceptions sur la qualité des relations du travail influencent les attitudes envers la technologie, l'acceptation de coupures salariales et l'acceptabilité de subventions pour aider les entreprises en difficulté, et (3) il n'y a pas de différence dans les attitudes des différentes catégories occupationnelles de cols bleus, les gestionnaires et les professionnels ont les attitudes les plus flexibles.

En général, les résultats ne supportent aucunement la prétention qui veut que l'expérience ou la menace du chômage mène à une plus grande inflexibilité. Les résultats suggèrent cependant une certaine influence de la mobilité occupationnelle potentielle sur les attitudes de flexibilité. La plupart des gestionnaires et des professionnels possèdent des qualifications relativement transférables. Les plus instruits et les jeunes ont aussi fait preuve d'attitudes de flexibilité et ils sont généralement plus mobiles. Les résultats confirment également que la qualité des relations du travail influence la flexibilité.

The Production of Flexible Attitudes in the Canadian Pulp and Paper Industry

MICHAEL R. SMITH

It is widely believed that both economic security and management policies that foster employee trust increase the willingness of employees to be flexible with respect to work practices and to accept economic policies that foster competition in product markets. These claims, however, rest either on fairly indirect evidence — an apparent association between the presence in countries of institutions that provide economic security and better performance on one or another macroeconomic indicator — or on a series of generally sketchy case studies. In this article relevant data are analyzed from a representative sample of pulp and paper industry employees in Canada. The results provide only weak support for claims with respect to the effects of employment security and trust, thus suggesting some modifications to the standard interpretation.

In its treatment of the issue of employment security, most industrial relations writing has been closer to sociology than to economics. In the calculative world of modern economic theory employment security is likely to be viewed as an obstacle to efficiency (Buechtemann 1993: 9–12). For firms confronting unstable demand the provision of employment security limits their ability to adjust costs to market conditions which, in turn, is likely to reduce profits and investment (Donges 1985). Widespread employment security is also likely to slow down the process through which workers shift from less to more productive employment (Hogan and Ragan 1995).¹

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– The research reported here was funded by the Social Science and Humanities Research Council of Canada and the Fonds pour la formation des chercheurs et l'aide à la recherche of the Government of Quebec. Axel van den Berg and the reviewers of this journal made helpful comments on an earlier version of the paper.

1. But within a standard economic framework the effects of employment security may not be entirely negative. Employment security may constitute a compensating differential for lower wages and may be provided at little cost where demand is relatively stable — as in the public sector (Gunderson 1995). Employment security may also be a method for inducing employees to acquire employer-specific skills (Williamson 1975: 62).

In contrast, sociologists along with most industrial relations writers, have tended to assert that the provision of secure employment creates efficiency advantages (e.g. Kochan and Osterman 1994). It is argued that those whose employment is secure are more willing to acquire employer-specific skills (Hollingsworth 1997: 272–273), to be flexible with respect to tasks (Hirst and Zeitlin 1997: 226), and “to identify more closely with the firm as a community of fate and find it in their interest to contribute to its prosperity” (Streeck 1997: 197), as a result of which they require much less costly supervision (Gordon 1996).

THEORY AND HYPOTHESES

In this paper I use data on the Canadian pulp and paper industry to examine the effects of employment security on flexibility. Flexibility is a major concern of employers in the paper industry (Bourque and Rioux 1994). It has also been a leitmotif in policy debates over the relative economic performance of OECD countries (e.g. Siebert 1997). Two favourable effects of employment security on flexibility have been proposed.

First, it leads to productivity-enhancing flexibility within firms. How hard people work is to some degree discretionary (Offe 1985: 21–22). In an aggressive bargaining context of the sort likely to characterize labour relations (whether unionized or not), both employers and employees have an incentive to conceal and misrepresent. Employees overstate whatever disutility is attached to their work, whereas employers understate the revenue generated by employees (Miller 1992). Deliberate obfuscation by each makes precise calculation impossible for either. But, if a reasonably accurate calculation of the terms of potential effort bargains is impossible, the parties to the bargain are likely to fall back on broader beliefs and prejudices in informing their attitudes toward, and choices about, work effort and the contractual conditions that govern it. Work effort often involves a substantial discretionary component; negative beliefs and preferences with respect to the employer are likely to result in minimization of effort. Along these lines, it has become common to model two-party bargaining situations, including labour-management relations, as a prisoners’ dilemma game. When each side aggressively pursues its own interests, both end up worse off than they would have been, had they managed to cooperate.

How can a vicious circle of non-cooperation be avoided? Part of the solution, it is argued, lies in the provision of secure employment. Most employment relationships are long-term and this implies an iterated prisoners’ dilemma game. The fact of iteration makes cooperation one possible outcome (see Axelrod 1984). Employment security is critical to this (Miller 1992). Employees who believe their position to be insecure are likely to define their

interests defensively and negatively, and to pursue those interests aggressively, in a way that precludes cooperation. Conversely, employees with relatively secure employment “are likely to identify more closely with the firm as a community of fate and find it in their interest to contribute to its prosperity” (Streeck 1997: 201). Secure employees are less likely to use their unions to struggle for productivity-damaging but security-enhancing work rules. Dore (1986, 1987) is well known for his application of this argument to the case of Japan. But the claim has been made widely (e.g. Gunderson 1986: 133; Cohen and Zysman 1987: 131; Åberg 1988: 82–83; Dertouzos, Lester and Solow 1989: 125, 137; Muszynski and Wolf 1989: 252; Tyson and Zysman 1989: 63–64; Miller 1992: 210–212; Buechtemann 1993: 13; Osterman 1993: 230–233; Kochan and Osterman 1994: 14–15, 101–103; Hollingsworth 1997: 292; Streeck 1997: 201).

What happens where employment is insecure? The answer depends on the relative power of employees. Where they are organized into reasonably strong unions they are likely to seek to secure productivity-damaging work rules. These will involve narrow job classifications, limits on management’s pay-setting discretion, and limits on management’s discretion with respect to promotion. In particular, pay and promotion are largely determined by seniority. Osterman (1988: 62–68) calls such institutional arrangements industrial internal labour markets. These are a result, in part, of the struggle by workers to secure rules that limit the discretion of management to enhance efficiency by moving labour around, or promoting on the basis of perceived merit. Such rules have inhibited the internal flexibility management needs, it is thought, to deal with a turbulent environment.²

Enhanced trust and improved labour relations are major mechanisms through which employment security is thought to produce more flexible behaviour. Employees are likely to be less defensive when confronting the changes required by a competitive environment if they trust their employers and if the labour relations climate is reasonably amicable. Trust and better labour relations are both more likely where employers refrain from laying off (Miller 1992: 221–233; Fukuyama 1995: 188–189).³

The second mechanism through which employment security increases productivity is by facilitating the process of industrial restructuring. This idea has been most commonly expressed in discussions of Swedish labour market policy. By providing employment security, consecutive Swedish governments

2. The importance of flexibility has been a staple in OECD publications (e.g., OECD 1989, 1991).

3. There are other means for improving trust and the quality of labour relations. Miller lists enhanced communication, symbols of equality, employee participation in one or another decision-making forum, broadened responsibilities, training, and profit-sharing or gain-sharing plans.

are thought to have been able to extract a *quid pro quo* from both the leaders and members of the labour movement: an acceptance of the need for product market competition and its effects. Because employment itself is not at risk, unions and their members accept policies fostering international competition and refrain from demanding subsidies for industries in decline (Esping-Andersen 1985: 229–230; Martin 1984: 205–220; Björklund 1986: 43; Ramaswamy 1992: 1056–1057). In the earlier postwar period, this meant active labour market policies that speeded the movement of labour from industries in decline to expanding industries. In the later postwar period, the relative importance of the (more or less) passive protection of employment *in situ* increased (Rehn 1985). But the argument that the provision of employment security has helped to weaken popular opposition to product market competition and its disruptive effects on firms and industries persisted. Muszynski, for instance, is explicit in commending the policy to a Canadian context. Using Sweden as an example, he argues that “If workers feel secure in the face of change through access to extensive labour market policies they are much more likely to support industrial restructuring” (1985: 295). Similarly, Zysman (1985: 147–148) generalizes the argument as follows: “When adjustment entails sharp dislocation and extended unemployment in a range of sectors and communities, the result is intense political resistance to change. Eventually that means subsidies to sectors requiring protection.” Evidently, this implies that measures to avoid unemployment — that is, to provide employment security — can disarm this potential obstruction to restructuring (see also Gunderson 1986: 133).

In recent literature, then, the establishment of a credible commitment to employment security has been presented as an appropriate method for securing both greater flexibility within firms and a wider constituency for the flexibility implied by restructuring. The considerations above suggest the following hypotheses.

1. Greater employment security increases the willingness of workers to accept changes in work organization, i.e., internal flexibility.

2. In part, the effect of employment security on internal flexibility operates indirectly, by increasing the trust of employees with respect to their employers and by improving the general climate of labour relations.

3. Greater employment security produces more positive attitudes toward product market competition, which, for the purposes of this paper, may be termed economic flexibility.

4. Although the literature is less clear, it is also conceivable that attitudes toward economic flexibility are mediated by employees' broader set of experiences in the establishment, including trust and the quality of labour relations.

In addition, employment security varies across occupations within a single workplace. Specifically, occupations with more portable skills provide their occupants with more options. They are therefore less vulnerable should the competitive position of their current employer substantially decline, and they may be less defensive (see below). For present purposes, hypothesis 5 is simply specified as follows.

5. Employees in occupations that involve more portable skills should display more flexible attitudes.

THE PROBLEM OF EVIDENCE

The evidence on the effects of both economic insecurity and trust is surprisingly thin. Two sorts of evidence appear in the literature, both of which are used by Osterman (1988). He compares the degree of employment security across countries, then postulates a link between those practices and various dimensions of macroeconomic performance (see also Maitland 1983). He also makes reference to some high-performing North American firms that had provided employment security at the time he was writing his book. These approaches reappear in other work on the subject. Insofar as one can speak of a "method" in Fukuyama's (1995) treatment of trust, it is similar to Osterman's. Miller's (1992) rigorous analysis of trust, employment security and labour relations provides a theoretical treatment of the subject, leavened with a small number of cases (Lincoln Electric features prominently). Kochan and Osterman (1994) also review a number of cases, though briefly. Probably the best, most detailed, evidence on the issue is contained in the accumulated writings of Dore (e.g., 1973, 1986, 1987). But claims that the extent of employment security in Japan has been greatly exaggerated raise doubts about his interpretations too (e.g., Koike 1987: 308–313; Taira and Levine 1996: 140–153). Overall, the current research on these issues is weakened either by being very indirect (international comparisons of macroeconomic performance), substantially anecdotal (brief case studies), or resting on questionable assertions of the extent of employment security (the use of Japan as a case study).⁴

The effect of employment security on the broader acceptance of economic flexibility (i.e., the acceptance of competition in product markets) rests almost entirely on an interpretation of the postwar economic performance of Sweden. For example, Str ath (1989) has attempted to show that, as

4. Kochan and Osterman (1994: 58–66) themselves note the methodological fragility of the findings on which they rest their policy conclusions, although a case can be made that in drawing conclusions in the rest of the book they lose sight of this, earlier acknowledged, fragility.

compared to some other countries, the Swedish government did relatively well in moving employment out of the shipbuilding industry when it became clear that it was in relative decline. This success is taken as evidence of the importance of the political support for restructuring that policies producing employment security are likely to engender.⁵

But there are problems with this evidence too. Once again, it is indirect, since no direct evidence of widespread Swedish enthusiasm for restructuring has been provided. Moreover, the record of Swedish economic policies has been subject to reappraisal in light of the country's recent performance difficulties (Lindbeck 1997). And, finally, even if employment security had produced a wider political constituency for restructuring within the particular complex of institutions present in Sweden, it by no means follows that its provision would have the same effect within the very different institutional environment of Europe or North America. But this is what has to be assumed by attempts to generalize the argument (e.g., Muszynski 1985).

Thus, with respect to the putative effects of employment security and trust, the confidence with which the interpretation has been advanced is by no means matched by the quality and quantity of the research on which it rests.

Furthermore, as Kochan and Osterman (1994: 14–15) recognize, with respect to employment security there is an issue of feasibility. In an economy in which demand for a product may rise and fall by substantial amounts, a commitment to long-term employment security may become impossible to honour. Unilateral — trust damaging — action may be periodically unavoidable. Shortly after Osterman published his book, one of his best examples of the beneficent effects of employment security — IBM — laid off large numbers of employees. Even Swedish firms, long held to be models in the provision of employment security, started to move away from the practice in the early 1990s, as the combination of a severe recession and difficulties in financing programs that supported employment security (such as early retirement) forced policy changes (Smith et al. 1995).⁶ The basis for a

5. Thus, "The traditional ideology of high productivity and the instruments provided by recent legislation made it possible for the union leadership, though not without considerable strains and considerable subsidies, to carry through a contraction process more drastic than elsewhere in Western Europe but with less protest and less unemployment" (Stråth 1989: 103–104; see also 114–115, 234–235).
6. The Swedish Labour Market Board (AMS) financed early retirement at age 60 in areas of job scarcity. This, plus unemployment insurance entitlement, made possible retirement three months after the fifty-eighth birthday at a negligible (after tax) financial sacrifice. Furthermore, even before the financial crisis of the early 1990s, where severe labour market instability made a commitment to employment security infeasible, Swedish employers sometimes managed to establish less secure employment. See Gonäs (1984) and Davies and Esseveld (1989).

commitment to security may be more fragile than the theorists of its role allow. To the extent that this is so, it suggests, at the very least, that the contexts within which employment security has beneficial effects are limited and that part of the research agenda should involve the specification of those limits.

Given the character of the existing literature on the question, a good case can be made that there is a pressing need for research with the following characteristics. i) There should be less dependence on comparisons of macroeconomic performance. ii) Sociological theory suggests that there should be a more direct examination of the beliefs and preferences thought to be important in the determination of economic behavior. iii) Blanket statements about the effects of security and trust should be avoided. Instead, progress needs to be made in specifying the contexts within which the relevant generalizations apply, or do not apply. In the remainder of this paper, I report the results of the analysis of a data set that, to some degree, addresses each of these issues.

DATA AND MEASURES

In late 1992, as part of a larger study, 552 employees in the Canadian paper industry were interviewed on attitudes to employment security, flexibility, labour relations, and related matters. The Labour Force Survey was used as the sampling frame and questions were added to a monthly survey. This data set has four considerable advantages. i) At about the same time that the survey was conducted, managers and union officials in a judgment sample of seventeen pulp and paper plants across Canada were interviewed, thereby informing the quantitative analysis with a detailed knowledge of institutions and practices in the industry.⁷ ii) Because this data set uses the Canadian Labour Force Survey as a sampling frame, the results are generalizable to a known and identifiable population. iii) The authority attached to a basic government survey generated an unusually high response rate of 89%. (High non-response rates are a source of bias in survey research that is often underestimated.) iv) It was possible to supplement the information drawn from the questions for this project with information from the Labour Force Survey itself.

7. The sampling frame for the survey was the industry as a whole, not just the seventeen plants that were visited for in-depth interviews. All but one of the interviews in plants were conducted between March and October 1992. The plants visited covered the range of industry product, except tissue. The interviews were distributed as follows: Atlantic Canada, 3; Quebec 6; Ontario 4; British Columbia 4. In three plants, union officials could not be interviewed for various reasons.

Four questions measured flexibility (see table 1). They addressed attitudes towards technological change (Q25), willingness to accept a pay cut (Q12), free trade (Q15), and government subsidies to firms in economic difficulty (Q27). These four items cannot sensibly be aggregated into a single scale of flexibility. They are not highly correlated,⁸ and most of the correlations are less than plus or minus 0.1. Combining some or all of these measures into a single indicator would both lose information and deform the data.

The survey makes available a large number of potential independent variables. First, several are pertinent to the theory at issue here (see table 1). These questions measure the lay-off experience of respondents (Q7), their estimate of the likelihood that they would lose their job (Q8) and become unemployed (Q9), the likelihood that they could find another job (Q11), and the extent to which they worry that they might become unemployed (Q10). Regarding labour relations, there are questions on the extent of employee involvement in decision making at the respondents' workplace (Q6), on the general quality of labour relations (Q20), and on whether employers sometimes use the threat of downsizing to coerce employees to cooperate (Q24a), which can be seen as a broad indicator of trust in the employer.

Data on occupational categories are relevant to hypothesis 5. I divided the sample into the following categories: managers, professional and technical, clerical and sales, services, trades, operators, power plant employees, and foremen.⁹ In the analysis, there are seven occupation dummies (operator is the default category).

The important distinction here is the degree of portability of skills. Operators run the paper machines and the pulping process. Their work is organized into the classic lines of progression that define Osterman's internal labour market. Movement up the job ladder is determined by seniority, a principle that unions defend ferociously. The putative technical rationale of this system is that through practical experience working with someone occupying a higher rung on the job ladder employees acquire skill. But the resulting skills are, at best, portable within the paper industry.

8. The two highest correlations between any two items are 0.224 and 0.185. These two correlations show that people who thought it appropriate to resist technological change in order to save jobs were also slightly more likely to favour protectionism, and to agree that the government should sometimes temporarily subsidize companies to save jobs.

9. The categories "manager," "professional and technical," and "clerical and sales" are self-explanatory. The service category includes security guards, cleaners, gardeners and firemen. Remotely located mills need their own emergency response team, including a fire service.

TABLE 1
Wording of Theoretically Pertinent Questions

Dependent Variables

Q.25 In general, employees are justified in resisting technical changes because such changes often mean job losses in the long run. Do you ... agree totally ... disagree totally?

Q.12 If your workplace was threatened with closure, would you accept a pay cut if it were the only way to save your job? If yes, please indicate how big a percentage of your present wage: no pay cut, 1–10%, 11–25%, more than 25%.

Q.15 Over the next five years, which policies are likely to create the most jobs in Canada: policies that encourage international competition or policies that attempt to protect home markets?

Q.27 The government should try to save jobs by temporarily subsidizing companies that are having economic difficulties? Do you ... agree totally ... disagree totally?

Independent Variables

Q.6 When the management in your workplace plans to carry out major changes, such as new equipment, layoffs, staff reductions, or reorganizations, do the employees have much, little or no say over such changes?

Q.7 During the last three years, have you yourself ever lost or been laid off, from your principal job, even temporarily?

Q.8 On a scale from 1 to 5, with 1 being “very unlikely” and 5 being “very likely”, what likelihood is there that you will lose the job you now hold at some point in the next two years?

Q.9 On a scale from 1 to 5, with 1 being “very unlikely” and 5 being “very likely”, what likelihood is there that you personally will become unemployed at some point in the next two years?

Q.11 On a scale from 1 to 5, with 1 being “very easy” and 5 being “very difficult”, if you lost your current job, how easy or difficult would it be for you to find another job equivalent to the one you now have?

Q.10 Are you very worried, rather worried or not worried at all about becoming unemployed at some point in the next two years?

Q.20 In general, would you say that relations between employees and management in your workplace are very good, rather good, neither good nor bad, rather bad, or very bad?

In contrast, there are usually only two ranks among tradesmen (millwrights, pipefitters, electricians, instrument technicians, and so on): apprentice and journeyman.¹⁰ Apprentices become journeymen when they have served the specified number of years and passed the required courses offered at a local technical college. They do not have to wait for a journeyman to vacate a position before moving up. Their skills are substantially portable. And, because there is not the same rigid ladder of progression, there is a possibility of hiring from the external labour market into trade positions. Some of that takes place. This means that trades employees are part of a wider labour market in a way that the operators are not. The distinction has been treated as of considerable consequence in the literature on internal labour markets (e.g., Sørensen 1983).

Several of the other occupations are also generally portable. This is true of managers, professionals and technical employees, and power plant operators. These latter have a particularly interesting characteristic. Paper mills both generate and consume large amounts of energy. I have treated this as a separate category because, while power plant employees are organized into lines of progression, responsibility for operating the plant boilers and other power equipment usually requires licensing as a stationary equipment operator. With a portable license and a line of progression this occupational category differs from both operators and tradesmen. Several interviews with managers suggested that this was a group that thought and acted somewhat differently from other work groups. For example, in some plants they were identified as trouble makers. Separating out the group provides a way of examining whether, and in what ways, the ordered ranks of a line of progression (a trait power plant operators share with operators) or portability of skills (a trait power plant operators share with tradesmen) influence flexibility. Finally, foremen are separated out from management. Foremen occupy a managerial position, but almost all foremen start in production tasks whereas few plant managers would have done so.

This discussion of occupations is relevant because it adds the dimension of employment security identified in hypothesis 5: the capacity to find another job. Workers with more portable skills are likely to be able to respond to lay-offs by shifting to jobs with other employers. Consequently, other things being equal, more positive flexibility attitudes might be anticipated among workers with more portable skills.

Finally, there is a broad array of control variables, concerning the personal characteristics of the respondents, their workplace, their occupation, and the section of the industry in which they are located. The bulk of the

10. Although there were a few female operators at the time of the interviews, no plants with female employees in the trades were encountered. Hence, *tradesmen* is an accurate term.

sample is employed in establishments engaged in the manufacture of pulp or paper (SIC 271). Smaller numbers are drawn from establishments that convert paper into products — Paper Box and Bag Industries (SIC 273) and Other Converted Paper Products Industries (SIC 279). Average wages in the converting industries are a little lower than in the paper producing industry and there are no doubts other differences. To deal with this, dummy variables were introduced for the two converting industries, with pulp and paper manufacturing (SIC 271) as the default category.

INSTITUTIONAL CONTEXT

Broader aspects of the paper industry are likely to have implications for attitudes toward both internal and economic flexibility.¹¹ First, the average pay of manual workers is very high — about 30% higher than the manufacturing industry average. Consequently, there are relatively few quits. Given the industry-specificity of their skills, operators are the least likely to quit. Second, lines of progression introduce a substantial range into the pay of manual employees. As a result, income is not purely collinear with occupation. On a modern, wide, fast, machine, machine tenders (the senior position on a paper machine line of progression) have very high wage rates indeed.¹² Third, the Canadian paper industry is heavily dependent on foreign exports. In the early 1990s, approximately 45 percent of industry output was exported.¹³ This is an industry in which an outbreak of spiraling protectionism would be, quite simply, disastrous, a factor that might influence the attitudes of industry employees. Fourth, in aggregate, the industry is highly cycle-sensitive, although the degree of cycle-sensitivity varies by product. Fifth, although the output of the industry has consistently increased (net of the business cycle), employment has steadily fallen since the 1970s. The employment effects of the growth in output have been more than offset by rising productivity (Smith et al. 1995: 693).

These last two industry characteristics have important consequences for employment insecurity. The fact that employment in the industry has been declining is not, in itself, a major source of insecurity. The secular decline

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11. For useful studies of the social relations in paper production see Zuboff (1988), Penn, Lilja and Scattergood (1992), Bourque and Rioux (1994), and Vallas and Beck (1996).
 12. Many mills have a papermakers' rate tying pay to the speed and width (the 'trim') of the paper machine. The collective agreement will contain a chart showing hourly rates for each of a range of speeds and machine widths. Technological change increases the speed and width of the machines, so pay rates increase with technological change where this contractual provision applies.
 13. The relevant figures, for 1992, were drawn from Statistics Canada 36–250 (*Paper and Allied Products Industries*) and 25–202 (*Canadian Forestry Statistics*).

has been gradual and firms could and did manage it with a combination of natural attrition, supplemented in some plants by company-financed early retirement programs. Nor does the cycle-sensitivity of the industry necessarily produce insecurity. Temporary layoffs were common (but not universal) among the plants visited. But interviews with union officials made it clear that these were a standard practice in some plants and understood as such. A two-week shut down (say) was not seen as a particular problem. Part of the income loss produced by most shut downs would be covered by unemployment insurance, and the availability of overtime at other times of the year meant that the rest of the income loss could often be made up.

However, at the time of the interviews in plants, and of the survey, the industry was suffering a more severe recession than anything it had encountered for many years. In this period, in a significant number of the plants, there had been major temporary layoffs and, in several, permanent layoffs too. As well as the cyclical downturn, several factors contributed to this situation. There was the background of declining labour demands. In the 1980s, a period of prosperity led to substantial investments in additional plant and equipment in the industry, producing a marked increase in supply and increasing the precariousness of plants with older equipment. The value of the Canadian dollar was thought by the industry to be excessively high. New capacity added in other countries increased international competition. Nonetheless, despite the severity of the recession it is important to emphasize that, even at this time of employment crisis, not all plants visited had laid off workers. Even within those that had done so, the protection provided by seniority against layoffs meant that permanent layoff was not a risk for most manual employees. But it was a risk for a substantial minority, particularly in the newsprint industry in Eastern Canada, including Quebec, in which there was some risk of plant closure, or radical downsizing.

MODEL AND ANALYSIS

The theoretical literature discussed above implies that the effects of economic insecurity and other factors on attitudes toward flexibility operate in part through intervening variables. Here are two illustrations.

- Layoff experience, a measure of economic insecurity, may influence flexibility attitudes directly. But it may also influence them indirectly, by affecting the quality of labour relations and trust. At the same time, layoff experience may influence whether an employee worries about unemployment. This is important because, consistent with a sociological approach to the issue, beliefs and preferences are assumed to intervene between experience and reactions. It is also possible that worry about unemployment may affect flexibility attitudes directly or, again, indirectly through the quality of labour relations and trust.

- Occupation is likely to influence prospects of reemployment should a job be lost, because occupations vary in the portability of the skills they require. But occupation may also influence perceptions of the quality of labour relations. For example, managers may be more sanguine than manual employees.

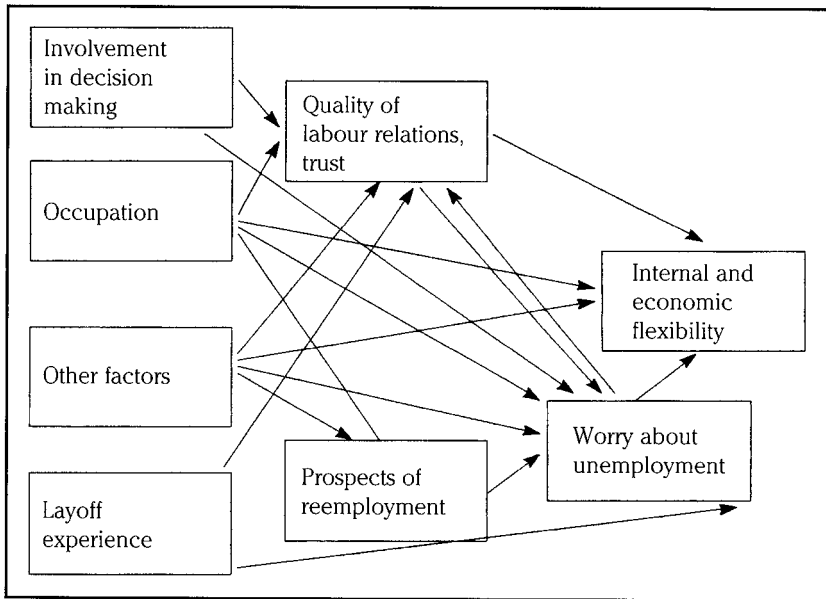
One could elaborate on these issues as they apply to all of the variables subject to analysis here. But the point is that the relevant theory suggests that, for the variables available for this analysis, some of the effects are indirect and some are direct. Consistent, then, with the broad sociological premise that the effects of conditions, including the experience of employment insecurity, are filtered through beliefs, I assume a sequence of the sort described in Model 1.

To test for sequences of effects of the type described in Model 1, hierarchical regression analysis is used (see Pedhazur 1982: ch. 7). Hierarchical regressions test for sequences of effects by consecutively estimating the coefficients of equations that include successive determinants of the final dependent variable(s) of interest. If there is a significant effect of an independent variable on a dependent variable but that effect disappears when a variable that is assumed to intervene between the two is added, *and* if the variable added predicts the dependent variable then an indirect effect is inferred. Model 1 implies three layers of effects: i) the variables contained within the first column of boxes (involvement in decision-making, occupation, other factors, and layoff experience); ii) the sets of intervening variables that immediately follow the first sets (quality of labour relations and trust, prospects of reemployment); and iii) “worry about unemployment” which is influenced by both the first and second sets of variables. In tables 2 to 5 these consecutive sets of variables are identified in the left column as Blocks I, II, and III. (Block III only contains one variable.)

Tables 2 to 5 list all variables that were subject to analysis. If the large number of potential independent variables were simultaneously entered into the equation there is a danger of difficulties of interpretation caused by multicollinearity. To avoid those problems, the variables in Block I, other than the occupation and industry dummies, were entered stepwise, with a significance level of 0.1 (two-tail) as the threshold for inclusion. The occupation and industry dummies were forced into the estimation.¹⁴ This produced equation I in each of the tables. The occupation and industry dummies, along with those variables in the first block that proved significant in the stepwise procedure, were then entered with the variables in the second block to produce equation II, and finally, with both the variables in the second and third blocks, in equation III.

14. Multinomial dummy variables cannot, of course, be subject to the same stepwise procedure. If any categories of the dummy are significant, all categories must be included.

MODEL 1



Note that, where the dependent variable is an ordinal scale, the data were analysed using ordinary least squares regression (tables 2, 3, and 5) and, where categorical, using logistic regression (table 4). Variables not entered in any run are indicated by shaded cells in the tables.

RESULTS

The results are presented in tables 2 to 5, one table for each of the dependent variables. Hypotheses 1 to 4, it turns out, fare quite poorly. None of the employment security variables within Block I (respondents' experience of layoffs and estimates of the likelihood of layoff or unemployment) has a significant effect on a measure of flexibility. This is true both before the introduction of the variables in Blocks II and III and after their introduction. In other words, there is no evidence of either a direct or an indirect effect of the experience of more or less secure employment on attitudes towards flexibility. Nor does the worry about unemployment measure (Block III) have a significant effect on any dependent variable. Only *one* security of employment coefficient predicts one dependent variable: respondents who thought that it would be relatively easy to find another job tended to be more positive toward free trade. This, however, would be a rather thin reed upon which to rest the claim that employment security affects flexibility!

TABLE 2
 Q25: In general, employees are justified in resisting technological changes...
 (1 = yes ... 5 = no)

<i>Block</i>	<i>Variable</i>	<i>Equation I</i>	<i>Equation II</i>	<i>Equation III</i>
I	Managers	0.647 (0.058)	0.837 (0.014)	0.852 (0.013)
I	Professional and technical	0.383 (0.186)	0.491 (0.089)	0.493 (0.088)
I	Clerical and sales	-0.008 (0.758)	0.003 (0.900)	0.000 (0.991)
I	Service	0.126 (0.765)	0.137 (0.746)	0.131 (0.756)
I	Craft	0.151 (0.370)	0.146 (0.392)	0.146 (0.391)
I	Power plant	-0.269 (0.308)	-0.188 (0.479)	-0.190 (0.475)
I	Foremen	-0.140 (0.635)	0.005 (0.873)	0.006 (0.843)
I	Bag and box industry	0.540 (0.027)	0.544 (0.020)	0.512 (0.030)
I	Other paper products	0.301 (0.256)	0.304 (0.242)	0.303 (0.244)
I	Sex (1=female, 2=male)			
I	Age			
I	Education			
I	Tenure			
I	Family size			
I	Married	-0.416 (0.016)	-0.342 (0.048)	-0.341 (0.049)
I	Individual income	0.207 (0.002)	0.202 (0.003)	0.195 (0.004)
I	Individual as % household income			
I	Q7: Been laid off? (1=no, 2=yes)			
I	Q8: Likelihood lose job? (1=unlikely, 5=likely)			
I	Q9: Likelihood unemployed? (1=unlikely, 5=likely)			
I	Q6: Say over major changes? (1=much, 3=none)			
I	Q1: Establishment size			
I	Q16: Union membership	-0.669 (0.001)	-0.538 (0.008)	-0.527 (0.009)
II	Q11: Easy to find another job? (1=easy, 5=difficult)		0.000 (0.938)	0.000 (0.961)
II	Q24a: Downsize to coerce? (1=no, 2=yes)		-0.282 (0.054)	-0.280 (0.056)
II	Q20: Quality of labour relations? (1=good, 5=bad)		-0.008 (0.183)	0.008 (0.167)
III	Q10: Worried will be unemployed? (1=no, 3=yes)			-0.003 (0.795)
Constant		2.046 (0.035)	1.811 (0.074)	1.915 (0.065)
Goodness of fit		Adjusted R ² =0.112	Adjusted R ² =0.119	Adjusted R ² =0.115
Number of cases		480	497	496

TABLE 3
 Q12: If your workplace were threatened with closure, would you accept
 a pay cut?
 (1 = none ... 4 = largest)

<i>Block</i>	<i>Variable</i>	<i>Equation I</i>	<i>Equation II</i>	<i>Equation III</i>
I	Managers	0.452 (0.002)	0.431 (0.003)	0.439 (0.003)
I	Professional and technical	-0.004 (0.753)	-0.002 (0.917)	-0.000 (0.977)
I	Clerical and sales	-0.041 (0.795)	0.002 (0.855)	0.002 (0.861)
I	Service	0.524 (0.024)	0.502 (0.030)	0.504 (0.030)
I	Craft	-0.101 (0.259)	-0.003 (0.713)	-0.004 (0.683)
I	Power plant	0.004 (0.782)	0.005 (0.716)	0.006 (0.685)
I	Foremen	0.277 (0.043)	0.175 (0.197)	0.173 (0.201)
I	Bag and box industry	-0.194 (0.162)	-0.246 (0.058)	-0.026 (0.052)
I	Other paper products	0.010 (0.475)	0.005 (0.705)	0.005 (0.724)
I	Sex (1=female, 2=male)			
I	Age			
I	Education			
I	Tenure			
I	Family size			
I	Married			
I	Individual income			
I	Individual as % household income	-0.002 (0.003)	-0.002 (0.006)	-0.002 (0.005)
I	Q7: Been laid off? (1=no...2=yes)			
I	Q8: Likelihood lose job? (1=unlikely...5=likely)			
I	Q9: Likelihood unemployed? (1=unlikely...5=likely)			
I	Q6: Say over major changes? (1=much...3=none)			
I	Q1: Establishment size	0.006 (0.006)	0.006 (0.005)	0.006 (0.005)
I	Q16: Union membership			
II	Q11: Easy to find another job? (1=easy...5=difficult)		0.002 (0.613)	0.002 (0.578)
II	Q24a: Downsize to coercion? (1=no...2=yes)		-0.001 (0.875)	-0.001 (0.857)
II	Q20: Quality of labour relations? (1=good...5=bad)		-0.009 (0.003)	-0.010 (0.002)
III	Q10: Worried will be unemployed? (1=no...3=yes)			0.003 (0.512)
	Constant	3.618 (0.000)	3.462 (0.000)	3.460 (0.000)
	Goodness of fit	Adjusted R ² =0.076	Adjusted R ² =0.070	Adjusted R ² =0.070
	Number of cases	422	438	436

TABLE 4
 Q15: Which creates more jobs, international competition or protectionism?
 (1 = protect ... 2 = free trade)

<i>Block</i>	<i>Variable</i>	<i>Equation I</i>	<i>Equation II</i>	<i>Equation III</i>
I	Managers	1.534 (0.005)	1.646 (0.003)	1.654 (0.003)
I	Professional and technical	1.571 (0.002)	1.664 (0.001)	1.651 (0.001)
I	Clerical and sales	0.284 (0.507)	0.331 (0.446)	0.250 (0.570)
I	Service	0.968 (0.191)	1.019 (0.172)	0.980 (0.190)
I	Craft	0.170 (0.518)	0.291 (0.280)	0.294 (0.276)
I	Power plant	0.827 (0.038)	0.852 (0.036)	0.851 (0.037)
I	Foremen	0.572 (0.165)	0.6895 (0.093)	0.702 (0.086)
I	Bag and box industry	-0.050 (0.899)	-0.439 (0.251)	-0.505 (0.194)
I	Other paper products	-0.225 (0.577)	-0.513 (0.229)	-0.519 (0.224)
I	Sex (1=female, 2=male)			
I	Age	0.303 (0.20)	0.361 (0.007)	0.360 (0.007)
I	Education			
I	Tenure	-0.236 (0.019)	-0.228 (0.022)	-0.236 (0.018)
I	Family size			
I	Married			
I	Individual income	0.213 (0.061)	0.138 (0.226)	0.123 (0.285)
I	Q7: Been laid off? (1=no...2=yes)			
I	Q8: Likelihood lose job? (1=unlikely...5=likely)			
I	Q9: Likelihood unemployed? (1=unlikely...5=likely)			
I	Q6: Say over major changes? (1=much...3=none)			
I	Q1: Establishment size			
I	Q16: Union membership			
II	Q11: Easy to find another job? (1=easy...5=difficult)		-0.218 (0.031)	-0.219 (0.031)
II	Q24a: Downsize to coerce? (1=no...2=yes)		-0.120 (0.607)	-0.107 (0.649)
II	Q20: Quality of labour relations? (1=good...5=bad)		-0.081 (0.396)	-0.072 (0.452)
III	Q10: Worried will be unemployed? (1=no...3=yes)			-0.075 (0.649)
Constant		-3.395 (0.017)	-1.514 (0.327)	-1.1892 (0.458)
Goodness of fit		Model $\chi^2=54.398$ (12 df), p=0.00	Model $\chi^2=62.192$ (15 df), p=0.000	Model $\chi^2=62.918$ (16 df), p=0.000
Number of cases		421	440	439

TABLE 5
 Q27: The government should try to save jobs by temporarily subsidizing
 companies?
 (1 = yes ... 5 = no)

<i>Block</i>	<i>Variable</i>	<i>Equation I</i>	<i>Equation II</i>	<i>Equation III</i>
I	Managers	0.368 (0.236)	0.555 (0.057)	0.553 (0.059)
I	Professional and technical	0.419 (0.149)	0.588 (0.031)	0.590 (0.031)
I	Clerical and sales	0.232 (0.435)	0.351 (0.202)	0.376 (0.179)
I	Service	-0.471 (0.288)	-0.761 (0.057)	-0.761 (0.058)
I	Craft	0.010 (0.533)	0.005 (0.274)	0.006 (0.722)
I	Power plant	-0.131 (0.626)	-0.008 (0.756)	-0.009 (0.739)
I	Foremen	0.368 (0.166)	0.555 (0.030)	0.559 (0.029)
I	Bag and box industry	0.190 (0.436)	0.308 (0.169)	0.355 (0.120)
I	Other paper products	0.134 (0.623)	0.284 (0.274)	0.286 (0.271)
I	Sex (1=female, 2=male)	0.910 (0.001)	0.933 (0.000)	0.948 (0.000)
I	Age			
I	Education	0.135 (0.013)	0.010 (0.059)	0.009 (0.077)
I	Tenure			
I	Family size			
I	Married			
I	Individual income			
I	Individual as % household income			
I	Q7: Been laid off? (1=no...2=yes)			
I	Q8: Likelihood lose job? (1=unlikely...5=likely)			
I	Q9: Likelihood unemployed? (1=unlikely...5=likely)			
I	Q6: Say over major changes? (1=much...3=none)			
I	Q1: Establishment size			
I	Q16: Union membership			
II	Q11: Easy to find another job? (1=easy...5=difficult)		0.008 (0.193)	-0.008 (0.172)
II	Q24a: Downsize to coerce? (1=no...2=yes)		0.108 (0.453)	0.106 (0.463)
II	Q20: Quality of labour relations? (1=good...5=bad)		0.175 (0.002)	0.181 (0.002)
III	Q10: Worried will be unemployed? (1=no...3=yes)			-0.004 (0.691)
Constant		0.510 (0.897)	0.258 (0.700)	0.315 (0.643)
Goodness of fit		Adjusted R ² =0.043	Adjusted R ² =0.073	Adjusted R ² =0.073
Number of cases		469	501	499

The two labour relations measures fare better. One of the two variables is a significant predictor of three of the four flexibility measures. Respondents who mistrusted employers (Q24a) were more likely to regard resisting technology as legitimate. Respondents who judged the labour relations in their plant to be good (Q20) were more likely to be willing to take a pay cut to keep their jobs, and to be opposed to subsidizing companies in trouble. These results are interesting, but they provide no support for the view that an indirect effect of insecurity is involved. This cannot be so since there is no significant Block I effect of employment insecurity to be reduced or eliminated by the introduction of the two labour relations measures.

All of this is to say that the results in tables 1 to 4 tend to contradict the hypotheses that predict a direct effect of employment security on flexibility attitudes and those that predict an indirect effect via the trust and the quality of labour relations. The data examined here would lead to the rejection of Hypotheses 1 to 4.

At first sight the results are also inconsistent with Hypothesis 5. The attitudes of craft employees, whose skills are portable, turn out to be no more flexible than those of operators, whose skills are not portable. Power plant employees, whose stationary equipment operator's licenses would normally facilitate mobility, turn out to be relatively positive with respect to free trade. But, again, this single coefficient would constitute a thin reed upon which to rest the inference of a portability of skills effect.

With respect to the hypotheses that inform this analysis, the results are overwhelmingly negative. What factors, then, do predict whether respondents will have more flexible attitudes?

Other than being a manager (or working in the bag and box section of the industry), no variable predicts both internal flexibility attitudes. The results do, however, tend to suggest that being better off produces more flexible attitudes. Managers and professionals, those with higher incomes, and the unmarried are disposed to favour technological innovation. And managers and those whose earnings account for a smaller proportion of total family income are more willing to consider the possibility of a pay cut. Those who, because of their occupation, income, or lack of dependents are least financially vulnerable tend to favour internal flexibility. In contrast, net of everything else, belonging to a union increases the willingness to agree that resisting technology is legitimate, but has no effect on attitudes toward pay cuts.¹⁵ Finally, as noted above, the quality of employer-employee relations affects attitudes toward internal flexibility. Employees who do not trust their

15. On the employer perception that the presence of a union increases the likelihood of resistance to technological change, see Bemmels and Reshef (1991).

employer (Q24a) were more disposed to accept resistance to technology, and those who reported better labour relations were more likely to accept the possibility of a pay cut, or a larger pay cut, to save their jobs. However generated, and apparently not as a result of employment security, better labour relations seem to produce more positive attitudes toward internal flexibility.

What about attitudes toward economic flexibility? Once again, managers and professionals displayed more flexible attitudes, as did foremen. In other words, being part of the upper occupational tier of the industry predicts positive attitudes towards flexibility. No other variable, from any block, has a consistent effect across both measures of economic flexibility. But the effects that are revealed in tables 3 and 4 make some sense. The more educated opposed government subsidies, while younger respondents and those with higher incomes favoured free trade.¹⁶ Interestingly, so did those who thought that they would have a relatively easy time finding an equivalent job (Q11). These attitudes toward free trade and, to a lesser extent, government subsidies, suggest that those whose lives are least likely to be disrupted by product market competition — in particular, the educated and the young, and those who consider themselves to have portable skills — are most likely to favor economic flexibility.

DISCUSSION

The results presented here suggest that Model 1, diagrammed above, does not present a plausible description of the process of the formation of attitudes toward flexibility within this sample of paper industry employees. From the point of view of the theoretical starting point of this paper, the results are overwhelmingly negative.

16. In one equation, both *age* and *tenure* turn out to be significant predictors. A reader might be tempted to dismiss these coefficients because of anticipated collinearity. In fact, in some studies age is used as an indicator of tenure. However, the standard indicators of collinearity — tolerance, the variance inflation factor, eigenvalues and condition indexes — all fall within ranges tending to indicate no problem. The simple correlation between age and tenure is 0.548. On reflection, this is not surprising. Above the manual worker level there is quite a lot of mobility between firms (both within the industry and with other industries). Among manual workers, there is some mobility of tradesmen. More importantly, hiring in the industry has tended to come in waves, produced by the opening of plants or large investments in existing plants. At such times, employees from a range of ages get hired. All these factors reduce the correlation between age and tenure. The separate effects of age and tenure in the same equation are not, as it happens, central to the issues discussed in this paper. But the fact that they seem not to be collinear raises interesting issues with respect to the interpretations in publications where age is used as an indicator of tenure.

Most strikingly, contrary to a fairly substantial body of theory, employment insecurity seems, at first sight, to have no effect on attitudes towards flexibility. Respondents who had recently experienced layoff, or who thought it likely that they would lose their job and/or become unemployed, did not display distinctly inflexible attitudes. Nonetheless, some of the results might be seen as broadly consistent with a version of the insecurity argument. Consider, again, the variables that predict one or another measure of flexibility — managers and professionals were more flexible as were the single, the more educated, and the young. Arguably, these are all more potentially mobile employees: the skills of managers, professionals, and the more educated are likely to be more portable; the single worker can move over larger distances to new employments; and employers often prefer to hire younger workers because they are considered to be more trainable.¹⁷ It remains the case that the direct measure of re-employability — the likelihood that an employee could find an equally good job — proved to predict scores on only one flexibility measure, when combined with the Block 1 variables. Still, that is the only insecurity measure that predicts a flexibility attitude and the predictors listed above do seem to be consistent with a process in which potential mobility plays a role in attitude formation.

There is also pretty good evidence in these results that labour relations play some role in developing positive attitudes towards flexibility. One of the two labour relations variables had a significant effect in three of the four final equations estimated in each table. As we saw above, these effects appear not to be intermediate between employment security and flexibility attitude; rather, they appear to be quite separate from employment security. Yet the fact that the quality of labour relations is not simply a function of the level of employment security need be no surprise. Many factors are likely to influence the quality of labour relations — and of trust — including both the absolute and relative levels of wages (see Berg, Freedman and Freeman 1978). Whatever those variables might be, the cultivation of better labour relations appears to increase the propensity of employees to express positive attitudes toward both internal flexibility and, as some sort of spillover of more benign sentiments, the general level of economic flexibility.

CONCLUSION

The results presented here do not support a view that the confidence on the part of an employee that he or she will not lose a job will lead that

17. But, in the paper industry, employers do not necessarily prefer the youngest possible manual employees. In several mills the preference is to hire people into manual jobs after they have acquired industrial experience with other employers. This is because reliable performance in an industrial job is seen as an important supplement to the indicator of quality provided by schooling.

employee to either accept changes within their workplace or the inevitability of the changes implied by restructuring in the broader economy. Within this sample of employees in the Canadian paper industry that simply seems not to be the case.

However, the results reported here may be consistent with an interpretation that emphasizes the effects of relative security with respect to the prospects of finding an equivalent job. There are, in other words, two possible sources of employment security: one is a low probability of being laid off; the other is the probability of finding another job if the first one is lost. While recognizing the advantages of the second form of security, the North American literature has tended to emphasize the advantages of the former. But in this sample, at least, the second form of security — the prospects of getting another job — seems to play some role in forming some attitudes on flexibility (specifically, the general level of flexibility in the economy), whereas anxiety about being laid off (measured in various ways: likelihood of being laid off, likelihood of becoming unemployed, whether worried about being unemployed) plays no role with respect to either general attitudes to flexibility in the economy or internal flexibility. These results suggest that the emphasis on security with respect to current employment may be misplaced. In this respect, it is interesting that the original Swedish model of employment security — which has inspired so much of the writing on employment security and its benefits — put most emphasis on employment security through the possibility of moving between jobs rather than through the protection of people in their current jobs. From the 1970s, Swedish institutions were changed to provide considerably larger amounts of *in situ* employment security, something that was, in a suitably nuanced fashion, lamented by some Swedish observers (e.g., Rehn 1985).

Why might those who thought that they could find an equivalent job be more likely to favour free trade and oppose subsidies to firms in trouble? An obvious answer is that, for these respondents, the market worked reasonably well and they were more likely to approve it being allowed to operate in other domains. Moreover, managers, professionals and, perhaps, power plant employees, who were reasonably equipped to take care of themselves, could only lose insofar as their tax dollars were used to subsidize the jobs of those who could not take care of themselves.

These conclusions, of course, rest on the particular data set used here. Although this data set has several advantages, it is by no means perfect. So the question remains: to what extent do these results reflect the peculiar characteristics of the paper industry? The paper industry is not representative of the rest of the economy: it is highly capital-intensive; it pays better than average wages; and because it has strong unions that have enforced contracts that require that seniority be respected in lay-offs, most of its labour

force has much more employment security than is found in the rest of manufacturing and in large areas of the service sector. So the results from this paper cannot be generalized to the economy as a whole. Yet, at the same time, with its high rate of technical renewal and strong unions, the paper industry provides exactly the kind of context that Osterman (1988) saw as producing the disadvantages of North American employment insecurity. This paper, then, provides a suitable test of the relevant theory.

The paper suggests that, within one context where the effects postulated by Osterman ought to be found, they are not present. It raises the possibility that the emphasis in the literature on the effects of employment insecurity in the old, heavily unionized manufacturing industries may be misplaced. Of course, no claim can be made that it finally settles the issues it addresses, and much would be gained from further research, in other contexts. Most fundamentally of all, however, the results reported here suggest that future research cannot continue to treat as adequate the sorts of indirect evidence that have been typically used in support of claims about the effects of employment security.

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RÉSUMÉ

L'avènement d'attitudes flexibles dans l'industrie canadienne des pâtes et du papier

Un argument veut qu'une clause de sécurité d'emploi améliorera probablement la productivité de deux grandes façons. D'abord, à l'intérieur de l'organisation, les employés non inquiets quant à l'avenir de leurs emplois auront plus tendance à faire confiance à leurs employeurs et à coopérer lors de l'implantation de changements techniques, incluant la réorganisation du travail. De façon opposée, les employés craignant leur mise à pied ou leur licenciement déploieront des efforts considérables pour se protéger dans de telles situations. Ils chercheront à établir des marchés internes de travail qui limitent la discrétion de l'employeur de plusieurs façons comme, par exemple, l'établissement de règles d'ancienneté appliquées de façon

rigide en cas de promotions et de mises à pied ou licenciements. Ensuite, à la lumière de l'expérience suédoise, on prétend que les employés qui ont une sécurité d'emploi opposent moins de résistance à la restructuration industrielle et même la favorisent.

On présente deux sortes de preuves au soutien de l'idée que la sécurité d'emploi accroît la flexibilité efficiente à l'intérieur des entreprises. D'abord, on compare la performance économique générale de ces pays où l'on retrouve plus ou moins de sécurité d'emploi, en particulier l'Amérique du Nord et le Royaume-Uni versus l'Allemagne, le Japon et la Suède. Ensuite, il existe des études de cas d'entreprises nord-américaines qui accordent la sécurité d'emploi et dont on croit qu'elles performant mieux que la moyenne. Mais aucun de ces deux types de preuve n'est satisfaisant. Les comparaisons de performance macroéconomique entre pays sont hautement indirectes. Les études de cas, pour leur part, sont très anecdotiques. L'hypothèse de l'effet de la sécurité d'emploi sur la restructuration est surtout basée sur l'expérience suédoise. Mais jamais n'a-t-on présenté de preuve de l'enthousiasme des Suédois pour la restructuration.

Nous utilisons ici un ensemble de données qui permet une vérification plus directe des effets de la sécurité d'emploi sur les attitudes eu égard à la flexibilité. Comme partie de l'Étude sur la population active de 1992, 552 employés de l'industrie canadienne des pâtes et papier furent interviewés sur leurs expériences de mise à pied, sur leur degré d'insécurité perçue envers leurs emplois, sur la qualité de leurs relations du travail et sur leurs attitudes envers le changement technologique, les coupures salariales pour préserver les emplois, la concurrence internationale et la nécessité de subventions pour sauver des emplois. Ces données contiennent également une information détaillée sur les occupations qui varient selon que les qualifications qui y sont attachées sont transférables. Dans l'industrie du papier, il est probable que les gestionnaires, les professionnels et les employés d'entretien possèdent des qualifications qui sont en demande par d'autres employeurs, incluant des employeurs en dehors de leur propre industrie. Les opérateurs, pour leur part, travaillent à l'intérieur de lignes rigides de progression rendant leurs qualifications moins transférables. Les employés de centrales d'énergie sont à mi-chemin en ce qu'ils travaillent également à l'intérieur de lignes de progression mais détiendraient normalement une carte de compétence qui leur conférerait une certaine transférabilité. Telle transférabilité de qualification peut être considérée comme une autre source de sécurité d'emploi.

Nous avons analysé les données en utilisant la régression hiérarchique destinée à vérifier la présence de séquences d'effets. Ainsi, par exemple, cette méthode vérifie la présence d'un effet résiduel de la sécurité d'emploi sur les attitudes envers la flexibilité à travers la qualité des relations du travail et le degré de confiance envers les employeurs.

Nos principaux résultats sont : (1) ni l'expérience de la mise à pied ni la probabilité d'être mis à pied ou de devenir chômeur n'a d'effet direct ou indirect sur les attitudes de flexibilité; (2) les perceptions sur la qualité des relations du travail influencent les attitudes envers la technologie, l'acceptation de coupures salariales et l'acceptabilité de subventions pour aider les entreprises en difficulté, et (3) il n'y a pas de différence dans les attitudes des différentes catégories occupationnelles de cols bleus, les gestionnaires et les professionnels ont les attitudes les plus flexibles.

En général, les résultats ne supportent aucunement la prétention qui veut que l'expérience ou la menace du chômage mène à une plus grande inflexibilité. Les résultats suggèrent cependant une certaine influence de la mobilité occupationnelle potentielle sur les attitudes de flexibilité. La plupart des gestionnaires et des professionnels possèdent des qualifications relativement transférables. Les plus instruits et les jeunes ont aussi fait preuve d'attitudes de flexibilité et ils sont généralement plus mobiles. Les résultats confirment également que la qualité des relations du travail influence la flexibilité.