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Making a Difference
Knowledge Activism and Worker Representation in Joint OHS Committees
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Activismo cognitivo y representación laboral en los comités conjuntos de salud y seguridad ocupacional

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Article abstract

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Making a Difference

Knowledge Activism and Worker Representation in Joint OHS Committees

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This article elaborates the concept of knowledge activism as a way of understanding effective health and safety representation within the current Ontario legal regime of internal responsibility. Based on interviews with unionized health and safety representatives in the auto industry, we suggest that knowledge activism is a form of political activism by worker health and safety representatives that is organized around the strategic collection and tactical use of technical, scientific and legal knowledge. We argue that knowledge activism is more effective with reference to larger scale changes in work processes, workplace organization and technologies, and with reference to occupational health issues. Knowledge activism is conceptualized as an effective adaptation to a legislative regime which involves worker representatives in decisions without providing substantive power or proactive enforcement support.

A key feature of health and safety legislation in many countries is the requirement for worker representation and joint labour-management health

and safety committees. This has led to an increasing research interest in understanding the effectiveness of worker participation in health and safety decision-making (for research summaries, see Shearn, 2004; Milgate, Innes and O'Loughlin, 2002; Eaton and Nocerino, 2000; O'Grady, 2000; Walters, 1996a, 1996b). The results of this research point to a variety of structural determinants that promote the ability of worker representatives and joint committees to improve workplace conditions including unions, legislated support for joint health and safety committees, workplace standards, and active workplace inspectorates. Yet, for many analysts, it is precisely these commonly identified supports for worker activism that can no longer be relied upon. Declining union density, inadequate legislative standards, limited worker training, and weak enforcement systems have all been identified as undermining the effectiveness of worker representatives and joint committees in Canada and elsewhere (Haynes, Boxall and Macky, 2005; O'Grady, 2000; Tucker, 1995; Sass, 1996; Storey and Tucker, 2006; Walters, 1985; Walters and Haines, 1988).

Rather than focussing on the constraints, this study directs research attention towards the opportunities within the current political-economic climate. We agree with those who argue for more active state protection of worker rights but recognize that changes of this sort are unlikely in the short-run in the context of neo-liberalism and globalization (Quinlan, 1999). Accordingly, our objective is to identify and investigate situations in which worker representatives and joint committees have been able to make significant improvements in workplace conditions notwithstanding the overarching limitations and constraints. Our goal is to explain why and how some worker representatives have been able to make significant improvements to working conditions while others have been less successful.

The framework for this study is the "production politics" perspective, that is, we analyze the strategic use of the political apparatuses of production by the parties in the employment relationship (Burawoy, 1985; Russell, 1999; Walters, 1985). Many researchers have identified the correlates of worker representative and joint committee effectiveness but few have examined the concrete ways in which changes are achieved within the production and joint committee contexts. We do this by analyzing the political strategies that unionized worker representatives use to improve working conditions, taking into account the power dynamics they face on the shop floor. These politics of production include the day-to-day relations among worker representatives, managers, and co-workers, the interplay between worker representatives' efforts to improve health and safety and collective bargaining generally, the process of hazard identification and correction, and worker representatives' efforts to mobilize legislated

occupational health and safety regulations and inspections to support their claims for improvement.

Using this approach, we found that some worker representatives were more effective than others in gaining substantive changes in working conditions. Further analysis revealed that the effectiveness of this group of representatives hinged on their autonomous collection and strategic use of information, a process we characterize as "knowledge activism." Compared with their less effective counterparts, knowledge activists were more likely to: gather their own information, assert workers' knowledge of hazardous conditions, mobilize their co-workers to support their demands for improvements, and propose alternative solutions. Although recognizing that there are limitations and dangers associated with an activist focus on research and scientific discourses (Sass, 1996), we suggest that this can be successful when it is underpinned by an understanding of production politics as played out in their workplaces. We theorize knowledge activism as an adaptive response to the constraining *and* enabling conditions in which worker representatives work for change. In other words, within our framework, knowledge activism is best understood as a worker adaptation structured by the constraints and the opportunities embedded in the current legislative and political economic context. We begin our analysis by situating our study within the literature about joint health and safety committees.

THE LITERATURE ON WORKER PARTICIPATION IN HEALTH AND SAFETY DECISION-MAKING

This study is informed by the academic literature on the effectiveness of workers' participation in occupational health and safety decision-making. To date, most of this research has been aimed at identifying the correlates of worker representative and joint committee effectiveness. Summarizing the results of this research is not a straight-forward task. Reviews of the literature invariably note the lack of consensus among researchers (e.g., Shearn, 2004; Eaton and Nocerino, 2000). This diversity runs along two dimensions: the level of analysis, that is, whether the critical determinants of effectiveness are external or internal to the joint committee system, and the choice of dependent variables, that is, whether or not "hard" measures of effectiveness such as changes in accident rates or the volume of compensation claims are essential. As will become evident, this study builds on, but does not replicate these approaches.

A central focus of academic investigation has been the production context, including the presence of a union, establishment size, characteristics of the work force, types of production, the level of mechanization and

automation, and the attitudes and expertise of management regarding health and safety (Eaton, 1994; Frick and Walters, 1998; Hall, 1999; Johnstone, Quinlan and Walters, 2005; Lewchuk, Robb and Walters, 1996; Reilly, Paci and Holl, 1995; Tuohy and Simard, 1993; Walters, 1996a, 1996b). While the overall results on firm characteristics have been inconclusive, a number of researchers have pointed to the presence and quality of union representation, the knowledge and militancy of front-line workers, the positive management attitudes and knowledge, and the level of government enforcement of the legislation as factors relevant to joint committee effectiveness or health and safety outcomes (Eaton, 1994; Eaton and Voos, 1994; Hall, 1993, 1999; Kochan, Dyer and Lipsky, 1977; Lewchuk, Robb and Walters, 1996; Milgate, Innes and O'Loughlin, 2002; Novek, Yassi and Spiegel, 1991; Shannon et al., 1992; Shearn, 2004; Tucker, 1995; Walters, 1996a, 1996b; Walters and Haines, 1988).

Researchers have also examined a range of worker representative and joint committee characteristics, including such things as committee size, committee composition, committee procedures and structures, meeting frequency and length, written agendas and minutes, committee scope, the participation of upper management, and representative training and knowledge (Kochan, Dyer and Lipsky, 1977; Ontario, 1986; Coyle and Leopold, 1981; Eaton and Nocerino, 2000; Tuohy and Simard, 1993; Hall, Forrest and Sears, 2003). The evidence here has also been mixed with a number of conflicting findings; however, one of the more consistent results has been the positive association between training and committee representative knowledge on both injury rates and perceived committee effectiveness (Coyle and Leopold, 1981; Eaton and Nocerino, 2000; Kochan, Dyer and Lipsky, 1977; O'Grady, 2000; Ontario, 1986; Walters and Haines, 1988).

As these latter studies suggest, the impacts of health and safety committees on working conditions are often understood, at least implicitly, as political outcomes—that is, there is a recognition of a "production politics" (Burawoy, 1985) operating within and outside the committee context which are critical determinants of change. In Canada, this recognition was made very clear in the ground-breaking work of Vivienne Walters (1985), who was instrumental in focussing researchers' attention on workplace politics as integral to the health and safety decision-making process. Walters (1985) emphasized the need to understand the day-to-day production context in which health and safety decision-making is played out (see also Walters and Haines, 1988; Walters et al., 1995). She found that workers' capacity to make meaningful improvements in their working conditions was limited by the pressures of production, the lack of worker control over the work process, workers' limited access to information, and

management's reliance on cost-related arguments. She pointed, as well, to the ideological constraints that limit the power and impact of worker representatives and joint committees. Walters argued that joint committees often have little effect on managerial decision-making even when managers are "cooperative" because worker representatives are drawn into a web of technical and collaborative discourses that structure their understanding of reasonable risk and realistic cost in ways favourable to management. And finally, she identified how medical and other expert discourses can confound workers representatives' capacity to recognize and challenge the presence of hazardous conditions.

A number of subsequent Canadian studies adopting the production politics perspective stressed the political, legal, and ideological constraints on workers and worker representatives (Hall, 1993, 1996, 1999; Tucker, 1995; Novek, Yassi and Spiegel, 1991; Ontario, 1986; Russell, 1999; Sass, 1996; Snider, 1991; Storey, 2004; Storey and Tucker, 2006). These critical assessments demonstrate how the limitations of Canadian health and safety legislation and the enforcement apparatus undermine the effectiveness of worker representatives and joint committees. For example, Walters and Haines (1988) found that worker representatives and joint committees were often ineffective because workers had not been adequately informed about their legal rights, which they linked to the failure of the Ontario law to ensure worker education. In another examination of the Ontario situation, Tucker (1995) suggested that the limited power of joint committees, which are advisory under the law, was further undercut by the declining enforcement resources dedicated to the Health and Safety Inspectorate, a problem that is even more acute in non-union workplaces. In a study of a Nova Scotia mine disaster, Glasbeek and Tucker (1999) demonstrate the enormous impact of labour market pressures and internal management manipulations of those pressures on worker acceptance of hazardous work, while Storey and Lewchuk (2000) document in the asbestos case of Bendix in Windsor, Ontario, the capacity of management to delay action on identified hazards in the face of weak government enforcement.

In this literature, two central conditions are frequently distinguished as critical determinants of positive change in health and safety: worker knowledge and worker power. This finding recognizes that workers and worker representatives can only act to prevent injury or disease if they have the capacity to identify and understand the hazards in their workplace. However, as Eric Tucker (1995: 255–256) puts it, "having knowledge is one thing, acting on it to improve health and safety is another." In line with this, most critical analysts in the Canadian health and safety literature have seen knowledge as a precondition for action, while action itself is understood as conditional on other aspects of the workers' power base. This

includes access to counter-hegemonic ideologies, the degree of economic (in)security, collective support from co-workers or their union, legal rights and protections, the enforcement apparatus, and so on (e.g., see Walters, 1985: 62–63; Storey and Tucker, 2006: 161).

The conceptual distinction between knowledge and the power to act on knowledge is derived from the substantial number of detailed case studies of health and safety politics which show that even when workers have clear knowledge of extremely hazardous conditions, they often accept those conditions (Glasbeek and Tucker, 1999; Gray, 2002; Hall, 1999; Storey and Lewchuk, 2000). However, it also relates to the argument that these same power sources are critical determinants of access to knowledge. Tucker (1995: 256) again reminds us that "power may be a precondition for the acquisition of knowledge, let alone the use of it," that is, workers' capacity to demand accurate and understandable hazard-related information is a measure of their legal rights and political power. Yet, the finding that knowledge does not translate readily into action is further complicated by the recognition that certain types and sources of knowledge are privileged over others, with particular reference to the greater legitimacy accorded to scientific and technical authorities over workers' indigenous knowledge (Hall, 1996, 1999; Walters, 1985; Walters et al., 1995; Wilson, 1983). In other words, even when workers have experience-based knowledge of hazards and seek to use that knowledge to minimize risk, their knowledge is generally not accepted as sufficiently authoritative to warrant changes in conditions. Indeed, it is precisely this emphasis on expert knowledge that prevents workers and worker health and safety representatives from achieving what Patrick Wilson (1983) calls "cognitive authority."

While few, if any, health and safety analysts would deny that knowledge can be an important source of power, most studies have emphasized the *absence* of knowledge or "legitimate" knowledge (Walters et al., 1995), and so, failed to look more closely at *how* knowledge is actually being acquired, legitimized, and used by workers and worker representatives. The result is that workers' capacity to acquire and use information and "legitimate" knowledge is understudied. This is significant in as much as the current regulatory and political economic circumstances may accentuate the significance of knowledge as a critical source of power and as a political tool. These are the issues taken up by this study.

THE STUDY

This paper relies on qualitative data collected through open-ended interviews with unionized worker health and safety representatives from twenty-seven different small to medium-sized (50–500 employees)

Ontario auto parts plants and four larger assembly plants. Most were union co-chairs of the joint health and safety committee in their workplace and the designated certified representatives (as required by Ontario's *Occupational Health and Safety Act*, 1990). All participated in an earlier phase of this research in which we surveyed both union plant chairs and health and safety chairs about occupational health and safety and the impact of restructuring on their workplaces. Auto parts plants were chosen as the primary location for this study because occupational health and safety in this sector is under-investigated in relation to the assembly sector of the industry. Since our analysis of the assembly plants also revealed good examples of the different forms of representation, we decided to include them in this paper. All plants in our sample were represented by various locals of the same union, the Canadian Auto Workers, all interviewees had received some formal union health and safety training; and most had benefited from the additional training provided for designated certified workplace representatives.

The interviews were semi-structured (ranging from 1–2 hours in length on average), tape-recorded, and transcribed. A follow-up phone interview was also conducted. Participants were asked how they identified health and safety issues, what they did to address those issues, and what they were able to achieve in terms of change. In asking these questions, we wanted to understand the methods, strategies, and tactics that worker representatives identified as successful approaches to change. In every case, the interviewer probed for information about the various channels through which change was achieved, both informal and formal.

Although we had other more traditional measures of committee effectiveness using our quantitative survey data, including self-reported monthly injury rates and direct assessments of committee impact (Eaton and Nocerino, 2000), these measures were not strongly inter-related nor were they consistently related to the information about working conditions and changes in working conditions in the qualitative data. In particular, it was evident that some representatives were reporting high levels of effectiveness in the survey while reporting very limited kinds of improvements in their qualitative accounts, while others were reporting low to moderate levels of success in the survey, yet, described quite substantial gains in their qualitative accounts. For these reasons, our categorization focussed on the kinds of issues health and safety issues representatives addressed and the outcomes of their efforts to improve working conditions. Variations in representatives' accounts were identified along three main dimensions: 1) a focus on immediate and visible safety issues vs. greater attention to both safety and occupational health issues; 2) a focus on smaller scale issues with limited impacts on production or cost vs. larger scale interventions differentiated in terms of cost, time required to make the changes, a need

for engineering changes, or a redesign of the production process; and 3) an emphasis on consequences or surface issues vs. identifying underlying causal factors. Interviewees' views about their degree of success informed but did not determine their place in the scale.

FORMS OF WORKER REPRESENTATION: THE SIGNIFICANCE OF KNOWLEDGE ACTIVISM

Our initial differentiation of strategies, issues, and outcomes revealed two broad forms of health and safety representation: technical-legal representation (TL) (N = 10) and politically-active representation (PA) (N = 21). These were distinguishable by the former group's reliance on established rules and procedures for identifying and correcting hazards and the latter group's willingness to challenge the claims and constraints imposed by management. However, within this latter group of politically active representatives, we also identified a more effective subgroup whose political engagement involved the strategic collection, use and deployment of knowledge. These knowledge activists (KA) (N = 11) were characterized by their persistent self-training and wide-ranging sources of information, their active efforts to legitimate and act on workers' indigenous knowledge about unsafe or unhealthy conditions, the scale and importance of the issues they addressed, their focus on underlying causes, and their willingness to present managers with solutions. They were also more effective implementers of change than either the technical-legal or the politically active representatives who did not grasp or mobilize the strategic power of knowledge.

Technical-Legal Representation

The distinction between the technical-legal and politically-active representatives became clear fairly quickly in our analysis. Whereas politically-active representatives understood to varying degrees, explicitly or through their behaviour, that their capacity to achieve improved health and safety conditions was a function of power and political influence, technical-legal representatives talked about their inspections and committee activities in very technical and legalistic terms. TLs behaved as if outcomes were dictated almost entirely by agreed upon and predictable legal, technical, economic, and procedural considerations. For this group, which constituted one-third of the representatives interviewed (N = 10), health and safety was clearly separated in their minds from "labour relation issues." Health and safety stood apart from other labour-management issues where conflicts of interests and a definite politics shaped by institutional power structures were understood to be part of the relationship. As one of these TL representatives

put it when asked if he wanted to become a plant steward or chair, "no, that's labour relations, it's a different avenue—health and safety … I guess it's just about people's safety" (TL1).

The technical-legal group was not distinguishable by the amount of training they had received or by their effort—there were many experienced and hard-working union representatives among them—but by the limitations they were prepared to accept. These representatives saw themselves primarily as inspectors who reported hazards as they were discovered within the context of their formal responsibilities, with particular reference to their formal inspection duties and their role as conduits for worker complaints. Problems identified in these ways were then corrected or not by management, based on economic, legal, or technical criteria defined and decided largely by management.

> I. What do you see as important health and safety for you?
>
> R. Saving peoples lives I guess. I watch making sure all of the equipment is working properly and all of it is maintained. And that way, it will save on … you'll end up getting less injuries …
>
> I. Can you give me any examples where you went to the company and asked them to do something and they did it, versus other situations where they didn't?
>
> R. Well I can say I don't think there are really any [where they didn't do what was asked] … if it is important … they jump on it right away. (TL3)

Among the technical-legal representatives were many who claimed high degrees of effectiveness and very little conflict with management. In both the questionnaire and the interview, these informants consistently described the correction of basic housekeeping and maintenance issues such as oil leaks, broken machinery, failures to wear safety equipment, and missing guards as evidence of their success. As a rule, these hazards were inexpensive to repair or disrupted the flow of production, so provoked few objections from management.

> What I do is I highlight all of these issues during our weekly safety audits … We present it at the joint health and safety committee meetings at the end of the month. So we're trying to do our part but as a safety committee, you are aware we only have a recommendations capability. We don't have the authority, to say, George, you go do this job. That responsibility falls in somebody else's category. So, we certainly bring it to their attention, management's attention. (TL8)

As the above quote indicates, legal-technical representatives were quite conscious of, but did not question, management's ultimate authority. They understood their responsibilities and powers in very legalistic terms as if they were dictated strictly by the legislation, and tended to rely on management experts without question.

R. My management counterpart on the joint health and safety committee was a person that followed the green book. Our company is a large company, so we have all of the resources that generally are needed. We have had people come in to do testing of materials; there was some concerns of mold in the facility, and we had an outside contractor come in to do it cause we didn't have that expertise. Maybe air sampling for specific things, we would call in outside contractors to do, but we have hygienists on staff that generally do all of the testing.

I. And the union feels perfectly comfortable in relying on people employed by the company?

R. Well, I guess that's a matter of debate. Sometimes when people don't hear what they want to hear, say that the company is not doing it right. You know, the time I was there, I never found the company to try to hide things from me. I was always able to be present at the testing. I could ask all the questions. I never found them to want to hide anything. But I guess sometimes shop committee people look at things differently for political reasons. But, I play by the green book, that's it. If it's in the green book, I do it. If it's not in the green book or master agreement that I have with the company, then it's not a safety issue. (TL8)

Politically-Active Representation

The other, larger, group—politically active representatives (PA)—understood their role and responsibilities quite differently. Although they varied widely in the degree of reported conflict and cooperation with management, they shared a common understanding that their role was not confined to the identification and reporting of hazards within the strict limits of the law. Characteristically, they believed that change often required them to contest management claims or actions.

The stuff that's the hardest to get is the stuff that's grey in the occupational health and safety act—a manager would look at you and say that's a luxury … So sometimes you either have to figure out how to force their hand or they won't do it. (PA5)

PAs were prepared to actively press their own claims for change, in some cases, by filing a complaint with the ministry of labour and/or mobilizing workers to pressure management.

Ventilation is at the top of the list because it's an ongoing concern—all these fumes will cause health problems you get guys with bleeding noses … you can get quite serious about this and you just have to act a bit harder on the company … I've got the Ministry of Labour coming in and issuing orders, getting testing done … Every day I'm on the production manager's mind, I'm in his face every day. (PA4)

The significance of their political engagement was important in other ways, as well. Politically-active representatives tended to identify larger

scale issues as health and safety problems. These problems went beyond the routine and included many that contested important aspects of management policy or the norms of the production system more generally.

> I would say the biggest issue today would be the lack of preventative mainte- nance of equipment and tooling. That would be the biggest one. Because when you downsize all your departments, something has to be impacted by that deci- sion. … And as a result, some things go unchecked for longer periods of time. If you have the resources in place of course, you can have your preventative maintenance program a hundred percent and other area a hundred percent. But when you cut back, it tends to affect that area. So you kind of, you can, so you find yourself in a situation where you're repairing things as they break down or as needed. You're not looking for problems at that point. (PA7)

Knowledge-Active Representation (KA)

As we further examined the accounts of politically-active representatives, we realized that there were important differences in the kinds of knowledge they used and the ways they used that knowledge, that is, we began to recognize that some representatives were making much more explicit, active, and effective use of indigenous, technical, and legal knowledge in order to identify hazardous conditions and substantiate their claims for improvements (Bryce and Manga, 1985; Walters, 1996a, 1996b, 1996c). Representatives who displayed this approach distinguished themselves by their *active and autonomous* pursuit of specialized knowledge and information—knowledge they then used to identify hazards, to assess risk, and most significantly, to strategically and tactically achieve changes.

> R. I had five guys in my plant with chrome holes—bleeding … it's probably the most toxic thing I've ever seen. … The company was ignorant to the fact so I found [out], I did some investigating throughout the labs 'cause we have our own labs. I investigated and that's when I went to them I seen the [name of chemical] and I knew this was a suppressant, they didn't want to recognize the situation, they said make them [the workers] wear personal protection equipment—that's not going to fix it … I told the company there's different places in Indiana and Kitchener, they don't have twists on auxiliary anodes, they have snap on …

> I. How would you know that?

> R. I researched. I research all the time. (KA10)

> And, in another case:

> R. We now have a procedure we negotiated involving new equipment, we sign it off before it gets to the production floor—if they bring in a new press, we look at the PSR, *we still do not trust the engineer who signed the PSR*, we go look at the piece of equipment—the equipment [itself] may be safe but if there is no ventilation, lighting, anti-fatigue matting or support equipment or if it backs into a busy forklift area, the machine may be safe but not the worker.

> I. How did you learn all that stuff?
>
> R. Trial and error. Talking to other people within your local, other plants, magazines, internet … I sit on a committee with … at this Local, a health and safety committee where you talk to other workers and by networking you find somebody who's done the same thing before … and call the Ministry of Labour inspector and ask them for advice. (KA7)

This approach was in contrast to the majority of representatives who tended to rely on information provided by management or management experts, or on their own personal experience or common sense. This was especially evident within the technical-legal group.

> I. Let's talk about coolants in the plant. Any worker comp. claims, any cancers?
>
> R. Cancers no … irritations of the skin, things like that, rashes. We have a representative from the company [that makes the coolant] and give us a breakdown of everything about the coolant. Give us a full report and that report is put out front for everyone to look at.
>
> I. Do you feel any discomfort from the fact that you're getting all the information from the guy who's selling the product.
>
> R. No, I don't. (TL4)

In contrast to the technical-legal representatives, politically-active representatives who were not knowledge activists were more likely to contest management claims and more likely to press for the changes they wanted by mobilizing workers or persuading government inspectors. None the less, their reliance on personal, indigenous knowledge and common sense often limited the range and level of the changes they could achieve. Without a knowledge activist orientation, PAs reported more difficulties convincing managers, government inspectors, and even workers that the problems they identified needed to be addressed.

> And I would go to back for any legitimate demand, but in some of them the company looked through myself to see how serious is the anxiety. They'll actually ask the workers involved in those areas. If they get feed back that it's just bullshit, it's just a couple of guys complaining, they won't move on them. The worker involved has to decide what he wants, is this an issue for him or is he just uncomfortable with it. (PA3)

Concomitantly, the successes reported by politically-active representatives who were not knowledge activists also tended to be limited along the lines similar to the TLs, for example, housekeeping issues such as cleaning up spills, cracks in hoists, mechanical problems, or behavioural issues such as failure to wear personal protective equipment. Consequently, the changes made tended not to alter the work processes or work organization in any fundamental way. There was also less emphasis, or at least success, in the

area of disease prevention. Prevention initiatives in these workplaces were directed at issues such as back injuries or other ergonomic problems in response to management's concern to limit compensation claims.

> Every plant has back injuries, I don't know why but they [management] try to stop them but you are always going to get that. Ever since carpal tunnel syndrome came in, there's a lot of people with repetitive injuries and that's why we got the ergonomic committee to work on that. (TL1)

Knowledge activists on the other hand were distinguishable by their ability to make significant improvements in workplace conditions, especially on relatively large-scale issues. When asked to report on their successes, knowledge activists typically provided more examples and the examples they offered demonstrated more substantial and more elaborate changes in technology, work processes, and work organization. The differences were particularly marked in the area of disease prevention. As one KA co-chair put it,

> Me and the guys [the other union JOHC representatives] … we made them put in half a million dollars in ventilation units and a million dollar sprinkler system and they've upgraded the building to the point where training, ergonomics are our main concerns [now]. (KA10)

While the level of the activism varied among the eleven KAs—some were collecting information and building their knowledge base almost continuously while others were more situational or issue focussed—all shared the view that effective representation required them to seek information autonomously through alternative sources. Most were very careful observers of the conditions in their workplaces, and in all the issues they raised in the interviews, they went beyond the information provided by management or management's experts.

> There were things in the [air assessment] report that were incorrect and I felt I needed some help from people that knew what they were talking about more so [than me] because, like, I'm still new to that … Chemistry was never my best … (KA5)

As this implies, they also recognized the limits of the knowledge they gathered through workplace inspections and investigations of workers' concerns. Knowledge activists extended this knowledge by conducting their own independent research through web sources, books, and personal and professional contacts. The most active of these representatives saw the collection and gathering of information as a continuous, on-going responsibility required by their role. They also realized the importance of expanding their capacity to understand, interpret, and analyze the information. Accordingly, many knowledge activists pursued advanced training and education whenever possible, often at their own expense.

> I drive my wife nuts. You see, I don't abuse the system and I do a lot of courses on weekends and on nights. … I do everything on my own time. I don't get paid for it. (KA9)

Knowledge activists understood the power of their independent information and analysis when "making a case" to management. Many reported that they were able to achieve significant changes by persuading managers in joint committee meetings or in one-to-one interactions using their independent research. Persuasion was not their only strategy. Depending on the issue, they also relied on direct pressure, if necessary. In some workplaces, management wanted only confirmation that there were worker complaints; in others, the representatives solicited support from workers or the union, or used threats of government inspections. At bottom, however, knowledge activists believed managers were more likely to act when they were convinced the risk was real and more likely to think the risk was real when the hazard was substantiated with documented evidence or external expert opinion. The success of these persuasive strategies may also reflect different management orientations to health and safety and worker participation more generally (Lewchuk, Robb and Walters, 1996), and these factors did vary across the workplaces studied; however, the representative's own research and knowledge was frequently an important part of the mix.

> I mean, you know, everything's different, but you try to get a result as quickly as possible. So if I'm having a problem with it going through there, I mean if it's in the green book or if it's in our collective agreement, they have to do it immediately. But this might be something over and above that the workers are asking for, it usually takes a little bit longer. You know, you have to build a business case, you know to get, a good example would be, I had a call, I was getting a lot of calls on the smoke enclosures for our TSR oven. … The company had no obligation to put booths around the enclosures because the air samples always proved that the samples were under the Ministry of Labour guidelines and the company standard guidelines for air samples. But still, like the employees on the first day had been complaining about their eyes burning, you know the mucous membranes, having a problem with them. So I asked the company if we could build some kind of enclosure around it to trap the smoke and exhaust it better … And about two years ago on a summer shut down, they started building these booths, and I mean it cost a lot of money, but I had to go through the production manager to do it. So that process took probably about, from start of the concerns, probably about, almost six months before I could get them completed. (KA1)

From our perspective, knowledge activists reported a higher degree of effectiveness than other worker representatives in that they were more likely to identify significant workplace hazards and more likely to convince management (and workers) that particular problems were serious enough

to warrant expenditures or major changes in work process, or that changes would pay off in terms of productivity, cost savings, or worker satisfaction. Often, these initiatives took considerable time to achieve; yet, it was the knowledge activists' commitment to working for these larger longer term changes, by developing and researching the case for change that was critical to their distinctive range and levels of success.

> R. Well, here's for example. We have a new addition on our plant … So there's a storage area in this new, this new addition. So there's more fork lift truck going along this aisle way now, in the old section, right? Now we have a punch press and we have control panels for them. Well the control panel is on the aisle side to which these fork trucks drive. Before the addition it wasn't as crowded … So now, we make a recommendation that they move that panel, that control panel to the other side away from the aisle. Ok. So that's our long term. Our short term is, is to anchor two poles in the ground, so that way, if somebody should ever get too close to that panel, or too close to that person working at that panel, they'll be protected by those, those poles that are, steel poles that are cemented in the ground. (KA9)

INDIGENOUS KNOWLEDGE AND AUTHORITY AS A LEGITIMATE KNOWER

An important insight that knowledge activists tended to share was the realization that their capacity to convince management depended substantially on their standing among managers, workers, other union representatives and leaders, and government inspectors. Unlike other politically-active representatives, knowledge activists understood that their capacity to get things changed required them to be recognized as legitimate authoritative "knowers" of health and safety hazards (Walters et al., 1995).

> If you're educated enough to know what you're talking about they don't talk down to you. They know [you're right] and they'll do it. (KA4)

For this reason, knowledge activists were particularly conscious of the need to ground their complaints in well-documented cases.

> Sometimes I have to push them. So that's a bit of a frustration because I'm big on documentation because we need to know what's going on and where we're going, and looking [for problems], I like to look for trends. (KA10)

Knowledge activists also understood the value of independent expert evidence as strengthening and legitimizing their claims. For example, a number of activists made frequent effective use of ergonomists and hygienists at their local occupational health and safety clinic (OHCOW) to address a persistent problem of fumes in the plant, while others frequently sought advice from their national union health and safety representatives or

through their fellow health and safety representatives at the local committee level. Many also understood the value of getting copies of research reports and papers, and made good use of library and web sources to substantiate their claims when making their case to management.

As this implies, knowledge activists realized that the identification and assessment of risk was not just a question of common sense. Knowledge activists did not assume, as many other representatives seemed to, that the risk involved in any particular activity was self-evident or easily recognized simply because he or she had been on the job for a long time or because he or she had basic safety training. And, unlike those representatives who rarely questioned management's use of scientific and expert knowledge, knowledge activists were more aware of the limitations of scientific and expert knowledge.

I. Have you brought in the Ministry?

R. The Ministry has been in there a couple of times. Both times that they come in the air passed allowable...

I. Limits.

R. Limits. However, you know if you work there. You know. When you're blowing your nose and nothing but black comes out, that something is obviously wrong. (KA10)

There's a level of labelling since 1989 that's required by WHMIS but to my estimation they are not realistic with the type of chemicals we use … so we don't label them … the operators know the difference. … We had tri-chloroethylene thrown in a barrel once by accident and what saved us was the operators knew the difference between the odours. It was mislabelled. Someone said it smells funny and we got it out of there within the hour. (KA7)

Many representatives shared this respect for workers' indigenous knowledge but the KAs also understood that it was often in these situations that their own research was critical in locating additional external "scientific" support to legitimate what they knew from experience (Walters et al, 1995). It is worth noting that the TLs often showed less respect for worker knowledge and were more likely to emphasize the role that workers played in causing accidents and disease. As one put it:

Like most companies there are procedures. The only thing is getting workers to do them. Because there's always a shortcut and it's trying to change that culture. So we need to have that paradigm shift where they're going from having the knowledge to implementing the knowledge. (TL1)

PRESENTING MANAGEMENT WITH SOLUTIONS

Along with the enhanced authority attached to their knowledge acquisition, the relative success of the knowledge activists in gaining

more significant improvements in conditions was a function of the tactical way in which they used information to make their case. Rather than just demonstrating that there were problems that needed to be corrected, they frequently did their own research on solutions. When KAs went to management with a complaint they often argued for particular solutions designed to appeal to management based on cost estimates and/or potential output or quality improvements.

I. Can you describe one of your more successful efforts to get a change in working conditions?

A. Ventilation was, we got some really good ventilation systems put in. Actually, in our benches we got moveable arm ventilation to work in the area, where they used to have just little hood where in order for the smoke to get to the hood, it has to cross the workers' breathing zone. With these arms, they come right into the work area right at the level of location and does a really good job.

I. How did you do that?

A. Doing my own research and seeing the people first who were complaining. I showed them [management] on paper … I went on internet and got pictures of what I wanted and showed where the problems are, that the ventilation was behind the worker and the smoke goes past you.

I. So you went to management with this?

A. I showed it to the workers first and then we collectively started talking to the company and showed them where the changes would be, that the guys will be on the job longer without having to go to first aid and report that there's itchy noses and coughing and spitting up black. (KA10)

The committee wrote the recommendation, outlining the physical aspects of the job and the problems that we foresee, and then we faced cost against cost of someone getting injured on that job. The company agreed that they would look at it [lift assist machine] and while they were mulling it over, we went to the manufacturers, different companies and looked at having different quotes and ideas, brought them in … and we got approval from corporate and they put it in across Canada, one for each plant. (KA1)

While the dangers of getting trapped in the logic of cost-benefit analysis have been discussed in the health and safety literature (Hall, 1996), most of these KA representatives used information about cost strategically. They recognized that costs were always an issue and must be dealt with. By framing their proposals in the language of management as in making a "business case," they sought to bolster the legitimacy of their petition.

Knowledge activists' pro-active approach to crafting solutions was in sharp contrast with that of other representatives who left the task of developing solutions to management. Consequently, when management proposed doubtful solutions or refused to make changes judged too

expensive, the representatives were unable to challenge those claims. As one representative reported when asked about his efforts to deal with guarding issues:

> Because of cutbacks we have a maintenance department that's smaller than what it used to be. So it's a resource issue. You know, who's available to do what. So sometimes I have to wait longer on certain issues. And there's room for that, sometimes. (TL2)

Providing solutions to managerial problems was also an important dimension of KA representatives' efforts to build working relationships with managers.

> I. What, can you give me an example of where something where you have been really successful in changing something because of health and safety?
>
> R. Yeah, I threatened a bilateral safety stop of the work.
>
> I. On?
>
> R. Stoppage and they fix it right away.
>
> I. And that's the way you do it?
>
> R. Well, if that's what it takes. Whatever it takes to get it done. But I can get frustrated or I can work along side with the company. I can make them put in temporary solutions, to make it safe for the time being but go for long term solutions. You have to be, you have to give some kind of recommendation to help them along. You can't always be pushing them, say look I need this fixed, I don't care how you do it, just do it. You got to be part of the solution. (KA9)

Again, this "working with management" might be interpreted to mean that the KAs were getting too close to management, and one can certainly recognize the dangers here. Indeed, it may be that some KAs become LTs over time. A different research design is clearly needed to examine this question, but what we can say is that most KAs seemed to be self-consciously building their management relationships based on the clear understanding that this was a necessary political strategy given the constraints and limitations of their position as worker representatives.

CONCLUSION: KNOWLEDGE ACTIVISM AS A SUCCESSFUL ADAPTATION

This study identified three different approaches or models of health and safety representation with differing degrees of effectiveness. The most effective was knowledge activism, which we describe as a form of political activism organized around the collection and use of a wide variety of health and safety knowledge. While many of the union health and safety representatives interviewed for this study understood their role in political

terms (PAs), the distinguishing features of the knowledge activists (KAs) were their autonomous collection and strategic application of legal, technical, and medical knowledge as political tools. For these representatives, control over knowledge was at the core of their activism and the primary reason for their greater success. They recognized that, as workers, they needed to demonstrate their competence as authoritative "knowers," which they routinely did by identifying and documenting hazards (Wilson, 1983), gathering information from medical and scientific sources, and calling on independent experts. This was in stark contrast to those representatives (TLs) who accepted company and government standards, guidelines, and assessments as uncontested.

Yet, what also distinguished the greater and deeper impact of knowledge activists over all the other representatives, both the PA and TL representatives, was their capacity to contest through persuasion and argumentation. While not shying away entirely from more overt political tactics such as mobilizing workers to complain or refuse unsafe work, or calling in government inspectors, these tools were used sparingly and only in conjunction with well argued and supported cases made to management within and outside the joint committee context. Management's understanding that these representatives would and could employ political pressure if needed, an insight shared by many KAs, may help to explain the company's willingness to listen and act based on persuasion alone. However it was clear from the representatives' accounts that many also saw the legal and scientific force of their argument as an integral aspect of their power to persuade, even in the face of little worker, union or state support.

These findings are consistent with the research literature on the effectiveness of health and safety committees in that they emphasize the importance of training, management responsiveness, and communication (Walters, 1996c; Lewchuk, Robb and Walters, 1996). At the same time, we acknowledge the concerns expressed by some analysts that activists who focus their energies around scientific and technical discourses may be muted and confined in their agendas and impact (Sass, 1996: 356). In our estimation, all forms of institutionalized representation are constrained in significant ways, and ultimately in their impact, and occupational health and safety is no exception. However, as this study suggests, there is an important distinction between those representatives who simply accept a subordinate position within this discursive domain (i.e., TLs), those who seek to operate outside that discourse (i.e. PAs), and those who seek to exploit the counter-hegemonic possibilities within this discourse as a conscious political strategy (i.e., KAs). We concur with Sass (1996) that health and safety committees *are* more effective in achieving larger scale changes when worker representatives challenge management rather than simply accept a passive technical role.

We also agree that corporate and state influence over scientific and technical discourses in occupation health and safety have been and continue to be important means for resisting worker and union demands (Castleman and Ziem, 1988; Dorman, 2006; Walters, 1985). Nevertheless, our findings suggest that we need to go beyond these arguments to recognize not only the limitations of joint committee representation and knowledge based discourses but also the opportunities that they offer.

The current political economic context certainly poses a number of challenges which limit the representatives' political leverage. Enforcement is often unreliable and inconsistent, and workers and unions are preoccupied with job security and concessions in the face of globalization, outsourcing and rapid technological change (Guadalupe, 2003; Quinlan, 1999; Quinlan, Mayhew and Bohle, 2001). Most representatives in this study insisted that they had a lot of support from their unions and their fellow workers, but it took very little probing to discover that they also often had problems mobilizing support for larger scale health and safety issues as priorities. Yet the KA representatives were able to gain some leverage in this context by using the same tools that management has traditionally used to control and limit labour's demands for change—that is, research, information, analysis, and communication.

In our view, there are a number of developments in Ontario which have enhanced the opportunities and potential for knowledge activism. Provincial reforms to health and safety legislation during the late 1980s and early 1990s addressed access to hazardous information (WHMIS, 1987), provided funding for more worker and representative training, and established a network of worker health and safety clinics. Legislative improvements in procedures and other requirements for health and safety committees such as requiring more rigorous reporting and record-keeping, were also important changes, along with increased penalties for non-compliance and reporting requirements which extended the corporate and executive liability. As measured by inspections, orders issued, prosecutions and fine levels, enforcement also improved through the 1990s (Tucker, 2003). These reforms did not greatly enhance the direct formal powers of worker representatives or joint committees, but in our view, they did encourage a deeper institutionalization of health and safety committees and representation at the workplace level, which heightened the status of the committees and their members, and fuelled a management integration of health and safety committees and issues into their management structures (e.g., see Geldart, Shannon and Lohfield, 2005).

The reforms also helped to create a significant network of health and safety training programs, union departments and experts, and independent agencies which offer representatives a better understanding of and access to scientific and technical knowledge. In recognizing the role of information

access, we would be remiss if we didn't also recognize the potential significance of e-mail and web based technologies (Carroll and Hackett, 2006; Pickard, 2006). We suggest that it is no coincidence that most of the knowledge activists were making frequent and extensive use of the e-mail to seek advice and the web to collect hazard related research information, engineering specifications, and equipment options and pricing.

Other factors may also be important in creating and shaping these political spaces and opportunities for knowledge activists, including changes in management ideologies and practices. For example, the development and spread of an audit corporate culture, in the auto industry in particular (Bandyopadhyay, 2005; Lin and Wu, 2005), may have had quite a profound effect on how companies approach health and safety management and health and safety committees. In emphasizing data-based decisions which often rely on worker and worker representative inputs, and by making more explicit the connections between production, cost, quality, and accidents (Zutshi and Sohal, 2005), audit programs such as the ISO 9000 and 14000 series may have further enhanced the significance of health and safety issues and decisions in management planning.

We recognize that the potential for the technical-legal form of representation can also be enhanced by some of these same developments. The broader effort by management to bureaucratize and professionalize health and safety may encourage a depoliticized understanding of the representative's role as a junior member of the management "team," while continuing to empower management experts over workers. Explanations for how and why representatives adopt or resist different modes of representation within these contexts are beyond the terms of this study, but we wonder, with reference to future research, about differences between companies and unions, and the role they play. It may be that the significant number of knowledge activists in this study is at least partly a function of the fact that we only examined CAW workplaces, given that CAW has one of more extensive union training and education programs in North America, and is generally more critical in how it approaches participative management approaches to health and safety and labour relations (CAW, 1997; Walker, 1997; Yates, 1993). Along similar lines, we also suspect that knowledge activism is more likely where collective bargaining agreements and human resource departments and policies are better developed (Walters, 1996a). Of course, this also raises the question of whether knowledge activism can readily develop in workplace settings where workers have no collective bargaining protections and security (Haynes, Boxall and Macky, 2005).[1]

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1. We are currently conducting a case study of a non-union plant that may help to provide some further insights on this point. For a preliminary report on this work, see Hall et al. (2005).

In the final analysis, a clearer picture of the workplace conditions that encourage or discourage the development of knowledge activism will require more research. We acknowledge that this study is limited both by its sample size and its reliance on unionized worker representatives. Our findings may also not generalize across other national and industrial contexts, although we suspect they will, given the many similar legislative, technical and corporate conditions in other jurisdictions (Saksvik and Quinlan, 2003; Walters, 1996c). Further research is also needed to confirm the existence of the different forms of representation identified here and the claim that they have different impacts on working conditions. Still, mirroring the suggestions of Rosskam (2001) and others (Walters, 1996c), we suggest tentatively that unions should begin to discuss ways of developing collective bargaining, networking and training mechanisms that provide worker representatives with the resources, skills, and frameworks that encourage *both* a political orientation and a knowledge activist capacity.

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RÉSUMÉ

L'activisme de la connaissance et la représentation des travailleurs sur les comités de santé et de sécurité au travail

Cet essai signale des occasions qui se présentent aux représentants syndicaux en matière de santé et de sécurité au travail d'améliorer leurs conditions de travail au sein du climat économico-politique actuel. Nous sommes d'accord avec ceux qui voudraient une meilleure protection étatique des droits des travailleurs, mais qui sont bien conscients que des changements de cette envergure sont peu probables dans le contexte de néo-libéralisme et de mondialisation actuel. Dans la même foulée, notre objectif consiste à identifier et à étudier des situations dans lesquelles les représentants des travailleurs et les comités mixtes ont pu réaliser des améliorations significatives des conditions de travail en dépit des limitations et des contraintes apparemment insurmontables. Notre but est donc de chercher à savoir pourquoi et comment quelques représentants des travailleurs ont réussi à apporter des améliorations significatives aux conditions de travail, alors que d'autres ont moins bien réussi.

Le cadre théorique se situe dans la perspective de la « politique de production », c'est-à-dire que nous étudions le recours stratégique aux appareils politiques de production par les parties dans la relation d'emploi (Burawoy, 1985; Russell, 1999; Walters, 1985). De nombreux chercheurs ont identifié les paramètres de l'efficacité des comités mixtes et de la représentativité des travailleurs, peu cependant ont analysé les façons concrètes dont les changements surviennent dans un contexte de production et de comités mixtes. Pour ce faire, nous étudions les politiques et les stratégies que mettent de l'avant les représentants syndicaux pour améliorer les conditions de travail, en tenant compte de la dynamique du pouvoir à laquelle ils font face sur le plancher de l'usine.

Nos données proviennent d'entrevues qualitatives menées auprès des représentants de travailleurs syndiqués dans vingt-sept usines de pièces d'automobiles de taille petite à moyenne (50–500 employés) et dans quatre usines d'assemblage de taille plus grande. Toutes les usines de notre échantillon étaient représentées par des sections locales des Travailleurs

canadiens de l'automobile en Ontario et toutes les personnes interviewées avaient suivi une formation syndicale en santé et sécurité au travail. De plus, la plupart avaient bénéficié d'une formation additionnelle conçue pour des représentants désignés et certifiés sur les lieux de travail. Nous avons demandé aux participants de décrire comment ils identifiaient des enjeux en matière de santé et de sécurité, comment ils abordaient ces enjeux et ce qu'ils pensaient être en mesure d'instaurer à titre de changements. En posant ces questions, nous voulions comprendre les méthodes, les stratégies et les tactiques que les représentants des travailleurs identifiaient comme des approches propices aux changements. Les entrevues étaient semi-structurées, enregistrées sur bande et transcrites.

En nous basant sur ces données, nous avons conclu que certains représentants étaient plus efficaces que d'autres sur trois dimensions : 1) une préoccupation à l'endroit d'enjeux visibles et imminents en sécurité versus une attention plus large aux enjeux liés à la sécurité et à la santé au travail; 2) une attention centrée sur des enjeux de moindre importance ayant des effets limités sur la production ou les coûts versus des interventions à grande échelle, marquées par des différences au plan des coûts, du temps exigé pour effectuer des changements, un besoin de modifications d'ingénierie, ou bien une reconfiguration du processus de production; 3) enfin, un accent sur les enjeux de surface ou de conséquences au lieu de la recherche de causes fondamentales sous-jacentes. Les perceptions que les interviewés se faisaient de leur degré de succès nous informaient sur leur position dans l'échelle mais ne la déterminaient pas.

Notre distinction initiale entre les enjeux, les stratégies et les résultats nous a révélé la présence de deux grands types de représentation dans le domaine de la santé et de la sécurité : une représentation d'ordre juridique et technique (N = 10) et une autre que nous qualifions d'activisme politique (N = 20). Elles étaient détectables par le recours chez le premier type aux règles et aux procédures établies servant à identifier les dangers et, chez le second, par la volonté de questionner les exigences et les contraintes imposées par la direction. Cependant, au sein de ce dernier groupe, nous avons détecté un sous-groupe plus efficace dont l'engagement politique impliquait la collecte stratégique, l'emploi et le déploiement de connaissances. En les comparant à leurs collègues moins efficaces, les activistes maniant les connaissances (N = 11) étaient plus susceptibles de recueillir leur propre information, de faire valoir la connaissance qu'ont les travailleurs des conditions dangereuses, de mobiliser les collègues en vue d'appuyer leurs demandes de corrections et de proposer des solutions de rechange. Ils s'avéraient aussi de meilleurs agents de changement que les représentants du groupe des activistes ou du groupe du type technique-juridique.

Le contrôle des connaissances constituait le noyau de l'activisme de ces représentants et était la raison première de leur degré plus élevé de succès. Ils se rendaient compte que, comme travailleurs, ils avaient besoin de démontrer leur compétence en « faisant figure de ceux qui savent », ce qu'ils faisaient en identifiant et en documentant les dangers, recueillant de l'information chez des sources médicales et scientifiques, ou bien en recourant à des experts indépendants. Les activistes de la connaissance étaient remarquables par leur capacité de contestation par la persuasion et l'argumentation. Tout en ne fuyant pas les tactiques politiques ouvertes telle que la mobilisation des travailleurs pour se plaindre et refuser le travail dangereux, ou bien le recours à des inspecteurs du gouvernement, ils utilisaient ces instruments de façon sporadique et seulement en ajout à des cas bien argumentés et appuyés, portés à l'attention de la direction aussi bien au sein des comités mixtes qu'à l'extérieur. La reconnaissance par la direction que ces représentants pouvaient recourir à la pression de nature politique au besoin pouvait aider à expliquer la volonté de la compagnie d'écouter et d'agir en se fondant seulement sur la persuasion, mais il devenait aussi évident en se fiant aux comptes-rendus des représentants que ces derniers pouvaient voir la puissance légale et scientifique de leurs arguments comme une partie intégrale de leur capacité d'obtenir, même face au travailleur moyen, l'appui du syndicat ou de l'État.

Nous avons conceptualisé l'activisme de la connaissance comme une réponse évolutive aux conditions contraignantes auxquelles font face les représentants dans leurs efforts en vue d'apporter des changements. En d'autres termes, à l'intérieur de notre cadre de référence, l'activisme de la connaissance se visualise mieux quand il est conçu comme une adaptation du travailleur, balisée par les contraintes et les occasions enchâssées dans le contexte politique et économique actuel. Plus précisément, nous reconnaissons les limites des pouvoirs des comités reconnus par la loi et l'effet négatif de l'absence de sécurité d'emploi, mais nous soulignons aussi qu'il s'est produit un certain nombre de changements positifs, tels que de meilleurs réseaux de formation et l'accès à l'information en ligne qui sont venus améliorer la connaissance des travailleurs et faciliter l'accès à l'information. De plus, nous voyons certaines réformes dans la législation et son application, en plus des développements dans la gestion des entreprises comme facteurs pouvant bonifier la capacité d'un représentant d'utiliser ses connaissances et cette information d'une manière plus efficace. Nous soutenons que l'activisme de la connaissance peut être une réponse stratégique devant être encouragée et apprise et, dans la même foulée, nous signalons le besoin de développer des mécanismes syndicaux en vue d'appuyer cette forme de représentation.