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CLR News

Safe sites,
a fundamental
right...

CLR

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Note

from the editor

Jan Cremers,
AIAS,
23 June 2008.

The subject articles in this issue of CLR-News are all very topical, with most authors reporting on health and safety.

The European Commission's action programme, meant to implement the Charter with fundamental rights for workers, announced in the late 1980s important initiatives in the field of health and safety. The following years a package of legislation was prepared and concluded, not least because it was the first area where a qualified majority in the Council of Ministers was the leading principle and the conservative British government could no longer veto progressive legislation in this area.

The foundation for European legislation was formed by the framework Directive on health and safety at the workplace (Directive [89/391/EEC](#)) and very soon afterwards several specific directives were formulated. The building unions in Europe played a prominent role during the preparation inside the Commission, during the debates in Parliament and before the final decision-making in the Council with regard to the Temporary and Mobile Work Sites Directive (normally called the building site directive). Council Directive [92/57/EEC](#) on the implementation of minimum

safety and health requirements at temporary or mobile work sites was adopted on 24 June 1992.

Now, 16 years after adoption, it is time to draw some conclusions on the impact the Directive has had in subsequent years.

One of the important features of the Directive was that the role of the coordinator was introduced and defined. Overall coordination was sought horizontally and vertically, in a production process with a chain of suppliers and executors, from the drawing board to execution on site.

During the project execution stage, the coordinators on the site are required to:

- ensure that employers and self-employed persons apply the principles of prevention in respect of the situations described and follow the safety and health plan where this is required;
- organise cooperation between employers with respect to safety and health matters;
- coordinate arrangements to check that working procedures are correctly implemented; take the steps necessary to ensure that only authorized person are allowed onto the construction site.

This does not take away the liability of the client or the main contractor. Even where a coordinator has been appointed,

this does not relieve the client or project supervisor of his/her responsibilities with respect to safety and health matters. Employers are obliged to comply with the minimum safety and health requirements applicable to construction sites, as set out in a detailed Annex of the Directive. These cover such aspects as energy distribution installations, emergency routes and exits, ventilation, temperature, traffic routes - danger areas, sanitary equipment, etc. They must also take into account directions from the coordinator on safety and health matters.

In this issue of CLR-News we take stock of what has happened in practice since the Directive was formulated. I do hope that the contributions find their way to both practitioners and policy makers. The subject articles are completed by interesting reports and reviews.

In the meantime my professional (and personal) situation has completely changed. In early April I was asked by the Dutch social-democratic delegation in the European Parliament to take up a mandate as Member of the Parliament. The reason was the stepping down of a MEP who was seriously ill.

And after my 'yes' things accelerated: on May 8th I was installed as MEP in the European Socialist group, and member of the Employment and Social Affairs and the Internal Market committees. With the French presidency coming, it is to be expected that several files still pending will come back on the agenda: the revision of the European Works Council Directive, the Temporary Agency Directive, the impact of ECJ rulings (Laval, Rüffert) and the revision of the Regulation on social security coordination for temporary work abroad, to name but a few.

You can imagine what this means for my agenda. For the rest: same person, other hat.

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Linda Clarke,
University of
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Introduction by the Sub-Editor

We – that is myself, Elsebet Frydendal Pedersen from Denmark and Oscar Llave from Spain - have long planned another CLR News on health and safety, especially concerning training for this in Europe. The special CLR seminar on 13th March on Occupational Health and Safety (OHS) galvanised us into action, particularly in view of the increasingly defensive position of the European Commission, critically discussed by Rolf Gehring in his article on the new European Community strategy!

As it is, this edition is much broader, both in scope and geographical spread, than was originally envisaged. There is much on Europe here, particularly on Denmark and Spain. Kirsten Jørgensen and Elsebet provide in their respective articles interesting insights into the prevention of accidents and initiatives taken in Denmark, which along with other Scandinavian countries has one of the lowest accident rates in the world. And Luis Ajamil and Oscar Llave discuss the regulation of OHS in Spain and attempts to prevent accidents through better training. Rolf Gehring, in reviewing the new British report on stress in the construction sector, also highlights the reasons for new health and safety risks faced by, amongst others, site managers, road maintenance staff and construction labourers. We learn too more on OHS training in Europe from the ENETOSH project, described by Ulrike Bollmann. Finally, the *Unia No Stress!* campaign in Switzerland, described by Dario Mordasni and Mattia Mandaglio, adds to the picture which emerges from all these articles, that the health and safety prevention has to be at all levels and a collective not an individual task.

We are fortunate to have contributions too from other parts of the globe. Bill Maloney from the US discusses the value of worker involvement in health and safety in construction, whilst Dale Belman describes the very useful Construction Chart Book on the US construction sector. And Humphrey McQueen, the Australian author, provides fascinating insights into his new book on the historical battles for health and safety by building labourers. Finally, Jill Wells takes us to sub-Saharan Africa, to Tanzania, where there are new initiatives to try to help workers demand greater protection and to raise the terrible standard of OHS, including on sites of Chinese contractors, apparent from the accompanying photo.

The new European Community strategy on health and safety at work – 2007 to 2012

Rolf Gehring,
EFBWW

Since 1978, the European Commission has been regularly publishing guidelines for Community policy on health and safety at work through programmes and strategies. They point to the priorities and spell out practical measures. Looking back, one could say these guidelines have been cornerstones for paving the way towards a broad European legal basis on safety and health at the workplace that improved the situation in most of the European countries. However, despite all the efforts made in recent years on the European health and safety front, there has been no tangible improvement in European working conditions. Too many opposing trends have cancelled out the achievements of these efforts and tempered their positive impact. Furthermore, with the work programme for 2007-2012 (COM[2007]62final), the Community has prepared for a period of accelerated change in the world of work. Already in recent years, radical changes have been taking place in the workplace as well as in society as a whole.

Changes in the world of work

Key aspects of these changes have been addressed in the European debate. These changes, described in keywords, include among others the following:

- the erosion in normal employment relationships
- the diversification in employment relationships, from the spread of part-time work, the growing proportion of temporary work and fixed-term contracts, to the spread of self-employed work, including forms of sham self-employed status
- demographic change in the member states
- the feminisation of work
- an ongoing growing number of chemicals and chemical products used in the workplace
- the enlargement of the EU and the growing mobility of workers.

What emerges from the discussion of actual working conditions is that the changes are just as dramatic as those in general social

conditions. The changes described in social conditions have led not least to a steady growth in psychosocial stress factors at work. In an ever-increasing number of member states, the sickness insurance institutions are reporting a dramatic rise in mental fatigue and psychological disorders among workers. As competition gets tougher on individual product markets, now mostly global markets, this leads to measurable stresses on individual workers. The intensifying pace of work observed in recent years bears witness to this fact. And new forms of work organisation, which shift responsibility and time pressures on to the working groups and individual workers, frequently exacerbate this situation.

The flexibility of working time also has negative effects in many areas for workers as the decision about actual working time all too often still continues to rest solely with the employer, as shown by the fourth European survey of working conditions published in 2006 by the Dublin Foundation. The growing mobility trend takes a wide variety of forms and also has its dark side: it is not rare for migration to lead to insecure forms of migrant work, even including illegal employment of the very worst kind.

However, the available data is also worrying with respect to factors traditionally regarded as occupational risks:

- *repetitive work tasks* (fourth report of the Dublin foundation) have increased measurably
- *stresses* caused by physical work agents such as noise or vibration have not been reduced
- the ever more rapid development of *new chemical products or preparations*, which are coming to be used at work, represent another headache from the viewpoint of preventative health and safety.

The new programme for 2007 to 2012 must seek to find the right solutions to these problems.

Participation and Consultation – sometimes only words

However, what the Commission has done in preparing the publication of its new strategy was lousy. All the programmes put out between 1978 and 2002 were always discussed beforehand with the trade unions, employers' organizations, EU governments and specialized agencies. The Commission would send out the first drafts of its communication, get back the reactions and take them into

account in the final version. It did none of that for the strategy 2007-2012. The Communication was only publicly unveiled at a press conference on 21 February 2007, catching all the organisations and governments whose role the Commission recognises as crucial on the hop.

One could ask whether this was only a faulty design or whether it fits into general lines of the current EU-policy. From my point of view, the EU policy on occupational health and safety (OHS) is on the defensive. It acts more and more in the shadow of the Lisbon Strategy and under the surveillance of DG Enterprise. What is discussed under the term "simplification" much too often results in deregulation. And this aim is expressively mentioned in the new strategy as a general target. DG Enterprise is the driving force for further impact assessments of existing directives and, among other, the construction site directive will be a target of deregulation in the near future. In its new strategy DG Employment should have taken an opposite point of view. However, chapter 4 that deals with legislation is divided into three sub-chapters:

- "Strengthening implementation of Community legislation"
- "Reinforcing cooperation in effort to monitor the application of the legislation"
- "Simplifying the legislative framework and adapting to change"

In the whole chapter you will not find a single word on necessary legislative initiatives, neither in connection with existing work-related health problems nor in relation to general social change and industrial relations. In contrast to this, the objective of "reducing the administrative burden on companies" is expressively mentioned. On the other hand, the document does include some proposals for better support for SME's instead of repeating again and again the usual mantra that all legislative action should not result in additional administrative or financial burdens for SME's. That inclusion provides at least some opportunities for future sensible action.

Contents of the New Strategy

Looking at the titles of the different chapter will give you an impression of the content of the document.

1. Introduction
2. Main challenges concerning health and safety at work

3. Objectives of the Community strategy 2007-2012
4. Putting in place a modern and effective legislative framework
5. Encourage the development and implementation of national strategies
6. Promoting changes in behaviour
7. Confronting new and increasing risks
8. Assessment of progress made
9. Promoting health and safety at international level
10. Conclusions

In general, one could say the new strategy is appropriate in its description, pointing out a number of tendencies, as described above, but weak in terms of practical approaches. In its first two chapters the document gives a proper description of the general tendencies described above. Chapter 3 includes the following enumeration of general objectives:

- guarantee the proper implementation of EU legislation;
- support SME's in the implementation of the legislation in force;
- adapt the legal framework to changes in the workplace and simplify it, particularly in view of SME's;
- promote the development and implementation of national strategies;
- encourage changes in the behaviour of workers and encourage their employers to adopt health-focused approaches;
- finalise the methods for identifying and evaluating new potential risks;
- improve the tracking of progress;
- promote health and safety at international level.

The only precise target mentioned is to reduce the incidence rate of accidents by 25%. Considering that in the EU 27 we have some 10,000 fatal accidents but some 160,000 work-related diseases resulting in death, one could say the Commission closes its eyes to that fact. It is true that the Commission mentions the problem of occupational diseases but no ambitious targets or actions are described in the document. Most chapters deal with necessary activities, which are required at the national level. The European level remains in a rule setting and advisory role. But this rule-setting function is also not taken by the Commission. The only precise areas of legislative activity mentioned by the Commission are musculo-skeletal disorders, the carcinogenic directive and needle stick

infections, as well as a third list of indicative exposure limits for chemicals. But all these initiatives are not new and the Commission started a second consultation phase for the first two last year, after a long period of standstill. In addition to these topics, there are some more requirements for legislation concerning, inter alia:

- a real enlargement of substances covered by the directive on carcinogens at work,
- the transposition of the European list of occupational diseases into a minimum directive and minimum standards for compensation proceedings,
- reducing the workplace limit value for wood dust and a concept for the replacement of indicative limit values for dangerous substances,
- appropriate safety and health provisions for all forms of employment (i.e. precarious work, migration, self-employed, home-work)
- converting the European list of occupational diseases into a minimum directive,
- action plans for specific substances *nano* particles (scientific programme for health related aspects) or asbestos (requirements concerning documentation of existing sources and for safe disposal),
- establishing minimum requirements for the representation and participation of employees in health and safety questions either in an autonomous body in the plant or as part of the general employee representation bodies. A proposal for a daughter directive to the framework directive on representation and participation of employees in health and safety questions should be tabled.

Bridge building between theory and practice

One of the main stumbling blocks to a successful health and safety policy is still the gaping divide between devising approaches to better health and safety protection and actually applying these approaches in the plant. The Commission is right to draw, during the coming period, special emphasis on the successful implementation of existing Community law. In this connection, evaluating the transposition of this legal framework into national law, paying particular attention to its practical application in the plants, takes on special significance. However, in the document the

Commission behaves more like a guardian, who mainly has to play a supportive role, rather than as an actor among others.

In connection with an integrated strategy, the inclusion of all interested parties from the outset holds the key to future success. The following aspects and/or approaches should be taken into account in a future strategy:

- employee participation at plant level (nothing is mentioned in the strategy),
- OSH as an integral part of higher education (engineers, economists, human resource managers and so on),
- the practical dissemination of good practices in addition to the usual means of electronic distribution,
- including the social partners more systematically, particularly for sectoral activities, so as to translate European activities to the plant level more effectively,
- testing the Swedish approach by regional safety experts for SME's,
- systematic consideration of and influence over technological developments in exemplary areas, as for example the consideration of working conditions in machinery engineering (nothing is mentioned in the strategy).

Basis: an integrated occupational health and safety strategy

Regarding the occurrence of work-related hazards and in connection with issues spelled out above, it is clear that a future European prevention policy must focus more strongly on becoming an integrated health and safety strategy including holistic concepts for specific topics. From this point of view, it is to be welcomed that the Commission is to integrate occupational health and safety into other Community policies. However, this intention must not be allowed to remain in the realm of rhetoric, but must be backed up with specific proposals and joint projects with other Commission Directorates.

To give only two examples: The very complexity of the stress-related phenomena described calls for close cooperation, e.g. with the labour inspectorates, scientific institutes, trade union representatives as experts in work organization or accident insurance agencies. Another topic in this respect is the 7th Framework Programme for Research and Development. There are numerous OHS-topics on which the 7th Framework Programme could focus, for example, alternative technologies to avoid work postures with hands over the

head (car-production), reducing the weight of heavy materials and increasing their ergonomics or the reduction in the vibration-potential of specific machinery. These aspects are totally missing in the paper.

Summarizing the whole document, one could say it provides an appropriate description of problems within the area of OHS but it fails as regards the Commission's actual duty. However, since the new strategy covers a period of six years, the further development of the EU in general, the composition of the new European Parliament (EP) as well as changes in some highly influential European countries become crucial aspects for the possibility to improve EU-policies in the area of OHS. The EP especially, as one of the main players, has the opportunity to launch its own initiatives on one or the other topic not or not sufficiently covered by the new strategy. In this respect, the Resolution, adopted by the parliament on January 15th, is a point of reference also for ongoing activities of the European trade unions.

The EP's resolution

The Parliament Resolution contains criticisms, which are similar in many areas to those of the European trade unions, while in other areas it has expressly taken up proposals that have been made by trade unions. Whilst, in comparison with the original draft resolution by the rapporteur, some specific wording has been deleted in the plenary debate, on the whole one could consider that the resolution remains a positive reference point for OHS-activists.

Some of the main points of the EPs resolution are the following: In common with the European trade unions, the EP criticises the fact that the strategy is not accompanied by a timetable or financial commitment and regrets the absence of concrete targets for reducing occupational diseases,

- The EP suggests that the Commission consider converting the European schedule of occupational diseases into a directive,
- Precarious employment, particularly temporary and fixed-term jobs, is referred to at various points as a problem. The Commission is called on to ensure that these workers have the same occupational health and safety rights and to conduct specific research into their working conditions,

- Linking demographic change with ergonomic and workplace design also creates opportunities to take concrete initiatives,
- As well as acknowledging the essential role of labour inspectorates, the EP proposes specific measures and demands,
- The necessity on appropriate participation rights for employees in the field of occupational health and safety is underlined in some points of the resolution but not covered by a specific point,
- In its Point 36, the EP makes concrete proposals for achieving preventive measures for asbestos-related risks,
- The EP recommends the adoption of a directive encompassing all aspects of musculoskeletal disorders and
- Calls for the revision of the carcinogens directive to include substances toxic for reproduction, to revise existing limit values and to establish new limit values (unfortunately, express mention of silicon dusts has been deleted here, but the wording remains open to our demands).

Over the coming months and years, we need to take up these points again and, in cooperation with the EP, demand or initiate concrete plans and activities by the European Commission. Still, OHS has been one of the few areas in which a social Europe has been shaped over nearly two decades though we are now on the defensive. And the new strategy is a document to this defensiveness.

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Accidents at work and views on prevention in the Danish Construction Industry

Concerning accidents at work, construction is a high-risk sector of industry largely because it causes many more fatal accidents than other sectors; only agriculture has a worse record, at least in Denmark. Working in construction is risky, but the risk depends on the job, safety conditions on site, the relationships between workers and managers, regulation, the national position on safety and many other matters. The Scandinavian countries represent some of the lowest incident rates for occupational accidents in the world, but even then construction still produces accidents and fatalities. Over

the last 20 years a lot of initiatives have been taken to motivate the sector to do something about this situation and some small indicators are now beginning to signal improvements. This article will tell some of the story about the size of the problem and the initiatives that have been taken in Denmark. An explanation for the type of problem and why accidents still occur will be put forward, together with possibilities for prevention and long run path this has to take.

The size of the problem in Europe

More than 12 million people¹ work in the construction sector in Europe, a figure that increased by 9% in the period 1995-2002. In the same period the accident rate for non-fatal accidents at work declined in the construction sector from 90 per 1,000 employees to 72. Nevertheless the rates are the highest out of the 9 main NACE sectors. Fatalities have also seen a decline in this period, from 15 per 100,000 employees to close to 10. Together with agriculture and transport, the construction sector is again in top place. So even though the period has witnessed a decline in the accident rate, the risk of accidents at work is still a tremendous problem for the sector

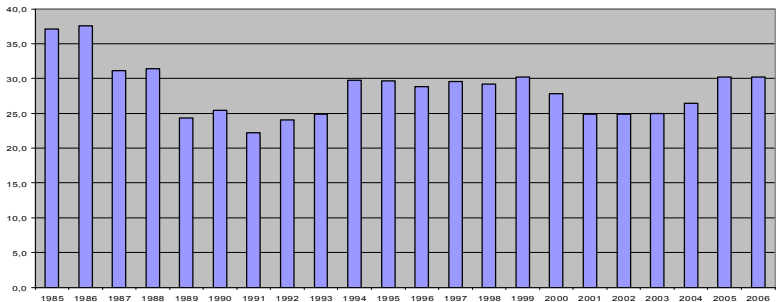
Variations in the problem and developments in recent years

What has happened since 2002 will be described using Danish data, but there is no reason to assume much difference between from what has happened in Denmark and the rest of Europe. In Denmark, 170,000 employees work in the construction sector, with some variations over the years. Most firms are small (less than 25) and a few are very large. Legislation is in place in Denmark to notify all accidents at work with more than one day's absence from work, but this is in the main only enacted by firms of a certain size. There is no real sanction if accidents are not notified and there is very little connection between insurance and notification except for very serious cases.

Figure 1 shows the incident rate of notified accidents to the National Working Environment Authority over the last 20 years (The Labour Inspectorate). We know that there is an underreporting problem in the Danish system, but we have figures from the Danish hospital system on first aid treatment that give an

indication of how big this problem is: the level of underreporting is nearly 50%, placing Denmark close to the incident rate for other European countries. The decline seen in the European data is the same as that in Denmark in the period 1995-2003, but then the rate again increases. This kind of fluctuation in accident rates has always been a matter of concern. Two main reasons are of interest: preventive activity and market conditions, given the prosperity of the construction sector in the last 3-4 years. Preventive activity has been repeatedly put in place over the years by the authorities and the sectoral organizations, especially in those years with a high rate, and then continued for a couple more years until the rate begins to decline. Every time you find the numbers beginning to decline, you clap your hands with joy because now you think you have found the way forward; then a few years later the numbers rise again. It is as though accidents decline when you focus on them, but when that focus ceases the rate again increases. Only when you look at the trend over a long, long period can you actually see a very slow decline.

Figure 1: Incidence of (notified) accidents in the construction sector 1985-2006

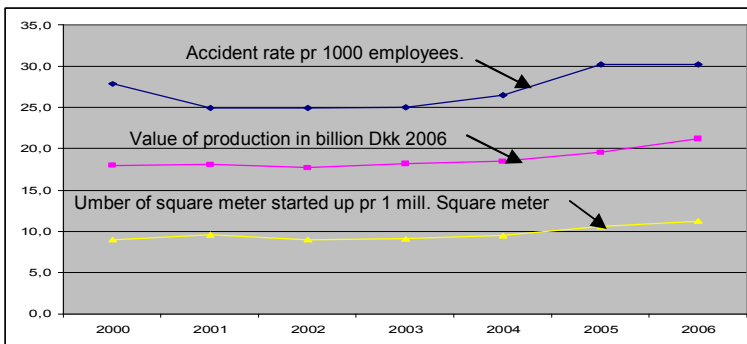


Activities throughout the period have included:

- 1988 A campaign about crane work
- 1991 A campaign about the risk of falls in the construction sector, especially from scaffolding and ladders
- 1997-98 Initiatives directed at designers and consultants
- 1999 Initiatives directed at building clients
- 2000-2001 Initiatives again directed at designers and consultants
- 2001 Special action on construction sites
- 2002 Special action on crane work
- 2003-4 The EU-campaign on construction sites

Markets conditions changed in the period 2002-2006/7, with an increase in the number of square metres started each year and in the value of production in prices. The increase in square metres and prices directly follows the increase in the accident rate. Figure 2 shows the development in the accident rate per 1,000 employees, the value (in prices) of production per 10 million Danish Krone (Dkk) and the number of square metres begun per 1 million square metres². From these findings stems the theory that a focus on accidents in a sector can reduce the accident rate because of the higher attention given, but when this attention ceases and the sector at the same time experiences increased production, with more new employees and pressure of work, then the accident rate will increase.

Figure 2: Accident rate, value of production and number of square meters in construction 2000-2006



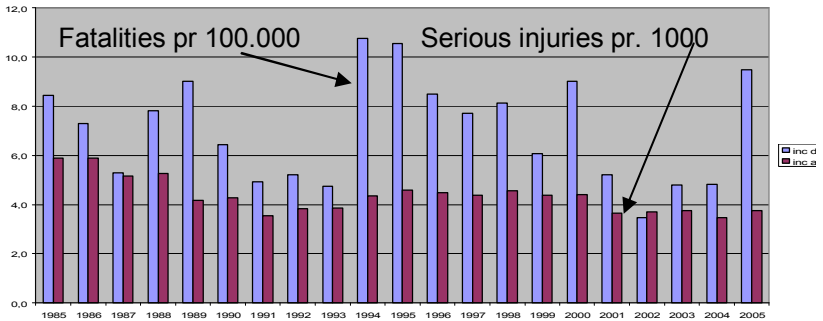
The consequences of accidents

Based on the 2002 Labour Force Survey³, an ad-hoc sample of about 0.9 % of all 16-64 year old people in the EU Member States had a long standing health problem or disability which they attributed to an accident at work. Such long-standing health problems caused by accidents at work were most prevalent in construction, at 1.6 % of workers.

The fatality rate for the Danish construction sector has ranged from 4 to 10 per 100,000 employees, with an average of 6 throughout the last 20 years, compared with the national average for all branches of close to 2 per 100,000 employees. The rate for serious injuries, defined as loss of part of the body and broken bones, is for the

construction sector close to 4 per 1,000 employees, whereas the national average for all sectors is less than 2. Figure 3 shows the development of the fatality and serious accident rate in the construction sector for the period 1986- 2005. For the serious accident rate, in particular there is a slow but steady decline over the twenty-year period.

Figure 3: Fatality and serious accident rate in the construction sector 1986-2005



Type of injury and type of accident

It is of course important to investigate and find preventative measures against fatalities and serious accidents. But in the context of all accidents, sprains and strains are especially important injuries to investigate. Figure 4, depicting the development of notified accidents divided into injury type in the period 1996-2005, shows that sprains and strains together with wounds make up 60% of all injuries. Figure 5 shows the combination of serious injuries and type of accident causing the injury, covering the 10-year period 1993-2002, where data is available.

Figure 4: Notified accidents in construction by type of injury 1996-2005

Type of injuries)	Year										Total
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
01 Fatalities	13	12	13	10	15	9	6	8	8	16	110
02 Amputations	52	64	44	46	61	38	45	37	33	38	458
03 Bone fractures	605	586	642	622	624	551	557	531	519	595	5.832
04 Dislocations, sprains and strains	1.596	1.644	1.690	1.847	1.625	1.576	1.586	1.585	1.712	1.809	16.670
05 Wounds	1.167	1.239	1.228	1.313	1.238	1.120	1.146	971	897	1.044	11.363
06 Burns, scalds	58	54	47	56	39	38	34	49	45	36	456
07 Concussions, internal injuries	466	423	471	502	473	426	390	448	427	449	4.475
08 Poisonings and Infections	52	61	62	49	51	60	42	35	43	51	506
99 Other injuries	409	518	479	536	516	488	484	515	704	804	5.453
Total	4.418	4.601	4.676	4.981	4.642	4.306	4.290	4.179	4.388	4.842	45.323

Figure 5: Serious injuries and type of accident in construction 1993-2002

Injuries	Accident with use of hand tools	Accident with use of working machines	Accident with use of transport equipment	Accident when manual handling of objects	Falls on level and to lower level	Collapse, skid or falls of objects	Violence	Traffic accidents	Other	Total
Fatalities	2	9	20	1	32	15	0	25	16	120
Serious	534	682	554	560	2483	875	13	124	912	6737
Other	5193	2594	1583	8233	10.106	2574	100	520	6407	37.310
Total	5729	3285	2157	8794	12.621	3464	113	669	7335	44.167

Fatalities are clearly caused by falls and the use of transport equipment either in transit or on the construction site. Serious injuries and all other injuries are caused by rather different activities and events, but falls are a main primary cause followed by manual handling. Falls at the same level primarily happen on roads and open

spaces on the construction site and are only secondarily from ladders and scaffolding, and thirdly on the construction itself. Falls to a lower level primarily occur from ladders, secondly from scaffolding and thirdly from roofs or parts of the construction. Manual handling is primarily of construction materials, secondly other materials and components, and thirdly hand tools. Machines causing most accidents are the circular saw. Transport equipment causing accidents are cranes, other lifting equipments or the use of trucks, vans or pick-ups⁴.

The construction sector's different activities and differing risks

Construction consists of rather different activities and occupations, each with very different risks even on the same site. Figure 6 shows the accident rate for specific economic activities belonging to the sector. The figures represent the average for the period 1998-2002 of notified accidents to the authority for which we know, as referred to earlier, that there is underreporting of approximately 50 % for minor accidents, though 100% reporting of fatalities. General construction operatives have clearly the highest overall injury risk, but carpenters have a higher fatality rate. General construction operatives and carpenters have the most dangerous jobs, whilst bricklayers, electricians and the plumbers also have many accidents but not with fatal consequences to the same degree. Figure 7 shows accidents notified to the authority for the same construction activities as in Figure 6, over the period 1998-2002.

Figure 6: Accident rate for particular construction activities

Economic activity, NACE 4 digit, Construction	Rate for Fatalities pr.100.000 employees	Rate for All injuries pr 1000 employees
4521 General construction	8	34
4525 Bricklaying	3	27
4531 Install. Of electrical wiring and fittings	4	23
4533 Plumbing	3	29
4542 Joinery installation, carpenters	10	28
4544 Painting and glazing	5	13
Other construction work	5	19
Total	6	27

Figure 7: Accidents notified for particular construction activities 1998-2002

Economic activity, NACE 4 digit, 45 Construction	Type of Accident / the cause of the injuries									Total
	The use of hand held tools	The use of working machines	The use of Transport equipment	Manual handling of objects	Falls on level and lower level	Collapse, skid & falls of objects	Violence	Traffic accidents	Other type of accidents	
4521 General contractors	916	498	505	1.775	2.430	618	29	112	1.287	8.170
4525 Bricklaying	150	69	120	435	696	195	6	24	318	2.013
4531 Install. Of electrical wiring and fittings	406	211	123	529	949	232	20	98	616	3.184
4533 Plumbing	433	253	88	621	676	191	3	45	439	2.749
4542 Joinery installation, carpenters	700	393	102	825	1.216	370	3	58	605	4.272
4544 Painting and glazing	89	25	26	203	345	104	1	24	155	972
Other construction work	165	91	53	225	358	101	4	26	186	1.209
Total	2.859	1.540	1.017	4.613	6.670	1.811	66	387	3.606	22.569

Again falls can be seen to remain a risk problem for all occupations, but especially for general construction operatives and carpenters; the same applies to the manual handling of objects. There are still many accidents with technical equipment, such as hand-held tools, machines and transport. Other situations to which the majority of accident risks are attributable are also apparent. Working on scaffolding and ladders and roofs represents a high risk, together with working at heights in other ways; walking around on poor surfaces, dirty and uneven, also constitutes an accident risk. And, if you have at the same time to handle or carry objects and take care of vehicles or other means of transport, then one can only wonder why more accidents do not actually happen.

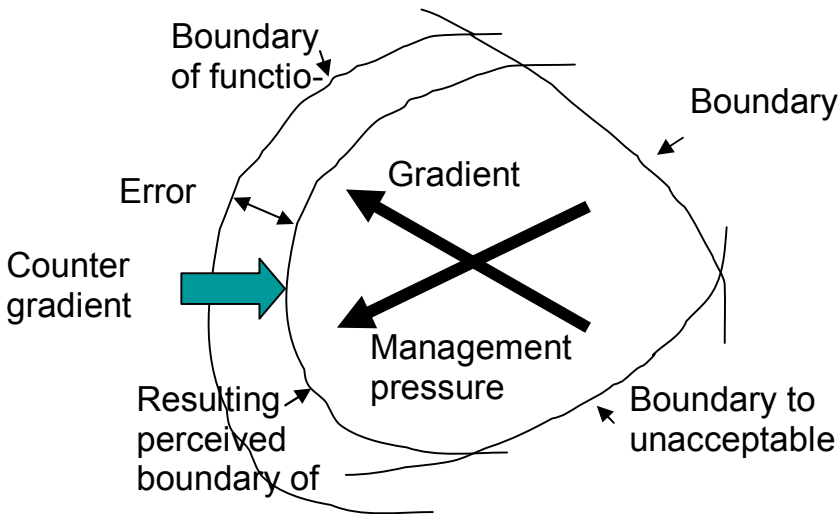
The causes and prevention of accidents

At first sight the causes of accidents can seem to be very simple, but often have a complex background. This is the reason why there are still many accidents though very few are of a new kind. It is difficult to identify what is risky and what to be avoided. The problem is that

normally most employees are able to take care of the risks at work and do prevent accidents happening because they are rather clever at taking care.

In 1997 Jens Rasmussen illustrated the phenomena of the 'drift to danger' model, whereby he explained that either employers need to maximize performance through effectiveness or employees strive for individual benefit, pushing behaviour and the activities themselves to being more risky. This is a process which very often occurs without regard to what is happening, at least not until an accident occurs. Figure 8 shows Jens Rasmussen's model of the 'drift to danger', indicating that, under the presence of strong gradients, behaviour will very likely migrate towards the boundary of acceptable performance⁵.

Figure 8: Rasmussen's 'drift to danger' model



Many accidents described above, such as falls and injuries associated with manual handling, may seem to be a matter of behaviour. But a closer look shows how much organization, planning, proper tools and equipments, a good time schedule, delivery of materials in time and so forth are relevant to why accidents occur. Knowing the type of accident associated with the different occupations in the construction sector and the 'drift' pushing people to take unnecessary risks, gives the site manager a tool to integrate safety in the planning process.

A new wave and culture and needs for education and competence

New EU legislation is on the way, placing more responsibility for safety in the construction process on clients and consultants. Nevertheless employers are responsible for their employees and should establish a safety culture in their own firm, concerning how to carry out the job, how to behave, and how to make safety demands on the site the employee has to work on. On site the site manager must integrate safety into all aspects, from the very beginning to the very end. The organization responsible for safety can be a good helping hand, carrying out client and process manager requirements, but safety has to be integrated into all decisions, planning and discussions. At the same time all individuals, the employees and the professionals, have to take day-to-day responsibility for themselves and their colleagues, to be aware of unpredictable situation and to take part in the overall safety regime. Only then can we hope to avoid serious accident in the sector.

Awareness, competence, education, consciousness, experience and motivation to succeed in achieving a safer workplace in the construction sector – these are some of the needs for employers and employees, as well as for clients, consultants, site managers, engineers and architects. These are the people who make most of the decisions that create the work situation for everybody else.

Prevention of accidents in the construction sector is a really tough job and the results can only be seen in the long run. We just have to keep going.

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1. Work and health in the EU-A statistical portrait, Eurostat data 1994-2002
 2. Source: the Danish National Statistical Bureau, Statistikbanken
 3. Work and health in the EU- A Statistical portrait 1994-2002, Eurostat
 4. Reports for the apparent harmless events, The Danish National Working Environment Authority, 2003
 5. Jens Rasmussen, Risk management in a Dynamic Society- A modeling problem, Safety Science vol 27 No2/3 1997

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Moving from glossy plans to real work situations

The construction industry has experienced radical change over the past five years in many places in Europe. First of all it has been at the centre of an economic boom, which has put pressure both in demand terms on the amount of housing to be built and on managing a shortage of manpower. In relation to the latter problem, a growing influx of foreign workers to fill the gaps has been seen. In Denmark groups of Polish and German workers especially have come, representing traditional skills and work patterns. This has of course introduced problems or challenges, particularly in relation to employment contract forms, language barriers and Danish labour market organizations. The background context for the industry is also changing. In 2008 a turnaround in the business and economic cycle is expected to occur, bringing building activity back to a calmer and steadier pace. Parallel to the fairly moderate influx of a foreign workforce in Denmark, new innovative methods for management and cooperation have been introduced to improve and speed up the building process. Methods such as partnering and lean construction have been widely introduced as a 'top-down' approach both in the planning and the execution processes. These have brought into focus the need for new competences and learning methods, many of which have as their starting point a 'bottom-up' perspective.

Health and safety - indicators of success?

Health and safety is – according to common understanding - a strong indicator of success in the integration of new methods. Some indicators of health and safety are quantitative, for instance the number of accidents, whether measured in terms of numbers per 10,000 workers or per 1 million working hours. However, this statistic is prone to inaccuracy if only 50% of the accidents occurring is reported to the working environment authority or if numbers are based solely on voluntary reporting. Nevertheless it is considered a valid indicator.

Another measurable indicator of the working environment could be the number of older workers still working in the construction industry. But here the search ends around 50 years of age. Only a few continue to work in the industry after that age due to long-term wear and tear. In their late forties and early fifties many construction

workers from all trades individually look for work in other industries, for instance as caretakers or similar jobs where they can use their skills. These occupations in turn experience statistically high rates of early retirement due to long-term wear. Measurable is also sick leave from work. Here construction workers show an increasing number of days away from work. In 2001 a survey showed that 31% of all construction workers had been reported ill and recorded on sick leave payment for more than fourteen workdays, half of these allegedly due to working environment problems - not least stress. In comparison the sick leave for the whole labour market in that year was 16% (Kirkegaard 2003). This survey has not been repeated during the economic boom, but observers estimate it to be the same or even worse due to increasing stress factors in production.

Accidents, sick leave and early retirement have over the last ten years received high priority attention both from the state authorities and from the construction industry itself. But improvements are still awaiting and the results from interventions are unfortunately not that striking.

Still in the hard core lane of indicators, more and better machinery, tools, work clothes and building materials have been introduced over the last 10 – 20 years, presenting improvements in terms of safer work opportunities including to scaffolding, ladders, battery-driven hand tools, lifting equipment to reduce heavy lifting, reduced size and weight of plaster walls for manual fitting, etc. and not the least protection from weather conditions. The problem is that there is no measurable direct relation between the use of a specific tool and the reduction of physical strain on a person – apart maybe from whole body vibrating tools used.

From an overall general perspective, much more can be done in relation to health prevention in addition to the items mentioned above. And it is a very sensible and effective route to pursue, evaluated in cost- benefit terms both in relation to the individual and society (BAT Kartellet 2003). With respect to more qualitative indicators and measurements, a range of “gut feelings”, well-being or ‘feel good’ expressions occur. *“There is no doubt that things run better when there are good sociable relations on site”* or *“A leader of a gang who is able to communicate well both with management and with his gang members is worth his weight in gold for production and production flow”* would be typical expressions of such values. In firms, which work on a more value-based basis the need for documentation of these issues is evident, however availed; *“It would be most agreeable if one could say that when we*

prioritise more qualitative initiatives in relation to health and safety on site, then we would earn 2% more!" (RH manager, BygSol 2007).

Cooperation and learning

A key issue in all changes is cooperation and learning. This also applies to changes in health and safety or - as a preferred term - in the 'working environment'. In the following this issue will be discussed in regard to the results of a large EU-funded project 'Cooperation and Learning in the Construction Industry' – abbreviated in Danish as 'BygSol - which was carried out in Denmark between 2004 and 2007 and covered more than 25 working sites at all stages of production, and 650 personnel, including building professionals and building workers of all kinds. The project was based in The Technical Institute, with partners in a range of trade schools all over Denmark and in three universities.

The overall model of change and objective setting in the project was directed towards a new and more effective building process, a new and changed work organization, and a new process with new forms for cooperation and learning and new leadership. Tools to be used were partnering, lean construction and workplace-based methods of adult learning.

The Danish construction industry

Before presenting the BygSol project, a few facts about the Danish construction industry may be useful. More than 165,000 people currently work in the industry. The majority are highly trained and organized, in either employers' organizations or trade unions. Work on site is usually accredited and paid as piecework, allowing the gangs high freedom to plan and organize the daily work on their own. The trades work with strong professional barriers between them and are often seen in relation to specific use of materials; each has, for instance, its own cabin with wardrobe, bathing and cooking facilities on site. The execution of the working environment is supposed to follow working environment laws, extensions to these being negotiated in Nordic tradition between the labour market partners and the government. At the workplace or site the centre for the working environment is organized as a safety organization, which is obligatory.

BygSol - DK

Initially each firm was contacted and a detailed contract was written and signed by all involved parties. Based on this, a plan was outlined, which could include activities in relation to partner cooperation, optimising of process and product, organization in the firm and/or on site, activities in relation to logistics and planning, "school on site", working environment and safety, evaluation, learning and knowledge sharing. All activities were specified to fit the special firm in focus. The importance of this focus grew clearer throughout the course of the project.

After the introduction and activity clarification with management, a kick-off meeting with all entrepreneurs - both tradesmen and managers - was held. It was called a 12-12 seminar due to the period it took i.e. from 12 noon one day to 12 noon the next. The seminar was conducted by an external coach and took place externally in a rented facility, for instance a public house. The activities in the seminar were centred on a future workshop (Jungk 1984) and related to cooperation in the forthcoming site production. They were conducted on an interdisciplinary basis and also included a range of psychical games and fun activities. The end results included a list of values and improving activities to be carried out in the day-to-day work to come. The 12-12 seminars proved to be very popular, especially amongst many of the tradesmen who enjoyed getting to know other tradesmen *"not just as the bricklayer, but as Søren, who also has a little son the same age as mine"*. (BygSol 2007) These reactions correspond with cultural and anthropological studies on gang members in the concreting trade, who define a good work colleague as a person who has practical sense, judgment and social intuition (Baarts 2004).

Following this interdisciplinary opening, the organization of the site was changed so that all gangs used the same cabin and lunchroom. Weekly meetings were introduced where all members of teams present on site had to appear. These meetings lasted exactly the time agreed upon - one hour or half an hour - and had a fixed agenda of subjects related to the production process, the list of values from the 12-12 meeting and health and safety issues. On some sites the working environment authority gave special permission to conduct the obligatory safety meeting at the weekly meeting. If an external teacher or coach gave special instructions the time set off for this was classified as "school on site". This could include solutions to a problem, which had arisen from a new design submitted by the

architect, or it could be an overall introduction to the lean construction concept.

"I am not into hairy things such as solidarity, "united front" etc. but having 30 minutes regularly together all of us, that gives a way of communication and a way of working together, which I insist you cannot conjure up in any other way." (Site manager, BygSol, 2007)

Teaching and learning new management concepts

A more in depth introduction to lean construction was, for instance, given to the gang leaders, if this was to be part of the management concept, which by and large most of the sites wanted. From the lean construction package the last planner system proved to be a particular success. The gang leaders met weekly with the objective of planning production in a rolling planning process running over 5- 6 weeks. The success was based on the interdisciplinary considerations which had to be taken and which would arise in the dialogue, for instance, between two gang leaders trying to integrate two trades' use of scaffolding on a specific spot or other logistic problems.

"The lean meetings are both about cooperation and avoiding conflicts. But foremost they are about planning and coordinating. You sit ten people facing each other and we all hear that specific gang leader promise this or that. This calls for honesty! ... There are of course limits to how planned things can get, but I am convinced that we avoid many delays. " (Gang leader, BygSol, 2007)

Partnering was another top-down management tool introduced as part of BygSol activities. Partnering has been introduced successively over the last ten years in Denmark, but is not widely implemented in its full scale, especially in relation to economic openness. Many firms have over the years in practice operated with a kind of a strategic management organization, often based on informal or personal relationships. In BygSol partnering the more formal concept of partnering was stressed, which could be carried through with a high degree of involvement from the beginning of the planning process to the end of the building process. Tradesmen's involvement was formulated as increased responsibility, autonomy and engagement.

"Larger projects managed to include partnering to a higher degree as seen here! But I need words to describe visions in a more varied manner plus more refined interpretations and applications. How do you compare trust for instance?"(Architect, BygSol 2007)

And the winner is

'Working environment' was from the beginning of the project defined mostly by two units of measurement i.e. reductions in work accidents and of stress defined in broad terms such as 'well being' or 'job satisfaction' relating to participation. The participants were in fact taken a bit by surprise as working environment proved to be the most successful result of the whole implementation of BygSol's ideas and visions. This was evident with respect to the interest growing out of the weekly meetings, from seeing how a focus on visions and learning was actually followed up in the daily run of the production and how increased awareness of other tradesmen's work organisation could interplay with your own in a positive manner. The rate of success was conveyed in verbal form by praise to the manager and/or tradesmen for their mutual willingness to improve work processes. This sometimes also found a more tangible form when the manager threw a spontaneous grill party with sausages and bread on site or just by plainly saying thank you (!) for a special effort at the weekly meeting. It would show in the choice of subject at the "school on site arrangements", where subjects such as stress and balanced diet would be part of the chosen agenda.

In terms of reduction in the accident rate, there was no direct statistical success. However, no serious accidents occurred throughout the time period and a general awareness to report and discuss the issue, including of close accidents, was evident. In addition to these observations statements were to be heard such as: *"Safety is a mutual responsibility. Rule breakers have not understood the social play (game) among the colleagues."* (Carpenter, BygSol 2007)

At a prestigious and very large housing construction site in Copenhagen almost the full range of BygSol tools were implemented. As part of another research project, The National Research Centre for the Working Environment made a survey on this particular site. They found that about 65% of the dialogue between the professionals and tradesmen related to safety issues and that at the weekly meetings - which at this site were conducted every other week - 44% of the meeting time was about safety, often put on the agenda by the tradesmen. This site also received the annual working environment reward, issued by the National Working Environmental Authority on recommendation. (BygSol 2007)

The results did not grow on trees

By and large the BygSol has shown a highly innovative and interesting way to change cultural and context-related issues of an industry which must renew its process of production not least to increase productivity and quality, retain a skilled workforce and improve its public image. But the project itself was not of course the whole solution and as a project it had to tackle a range of problems over the three years it ran.

First of all in project terms three years is a short time. It requires huge effort to organize a whole industry from the top-down level to everyday bottom-up activities. Thus the first 12 months were more or less set aside to introduce and motivate participants; after that came the choice of suitable sites and projects, which also accounted for use of time and for delays. Throughout the project period a rapid turnover in the project organization occurred. People were headhunted elsewhere to the booming construction industry. The knowledge based support system, among other things the cooperation between the three universities, was established late and had problems to figure out exactly what support was needed, not least in terms of the very down to earth daily subject issues. The evaluation was also introduced late, though being given high priority not least in the last six months. And, finally, the general expectation of BygSol as a onetime solution was maybe also too high-flown to be met.

At firm level the success seemed closely related to two things, whether top management accepted and kept on showing an interest in BygSol activities and whether middle management found it worth engaging in. For the latter the key issue was whether they had a fair say in deciding on participation from the very beginning.

To continue on the crest of a wave

In concluding on the very promising results of the BygSol project, it must be stressed that it has addressed key basic problems of the Danish construction industry. It has shown the interest and the benefits of a more interdisciplinary approach along the whole building process, from the client's idea to final delivery. This interdisciplinary approach was met in three respects. The first was between the tradesmen who usually sit in separate cabins and act highly individually on site, with only the safety meeting or the

building meeting as a mutual reference. In BygSol the mutual cabin was introduced and the weekly meeting, which allowed for daily interdisciplinary interaction. Added to this, the 12-12 meetings opened up friendlier daily cooperation. A second other interdisciplinary aspect was the last planner meeting, where the site manager planned and interacted with the gang leaders in a 5-6 week time range of the ongoing production. Here top-down intentions met the bottom-up reality for real and demonstrated that written blueprints and plans had to be transformed into verbal agreements and realistic work processes. The third interdisciplinary aspect related to the situation where the client organized workshops between users and the contractors who were going to produce the future buildings.

The success in relation to working environment issues was a somewhat positive surprise, but might not have been without the general social tendency towards a growing interest in the working environment, which has increased priority in the choice of career not least among young people. This is important in relation to the ongoing recruitment of the workforce and the public image.

The BygSol project has demonstrated a basic need and willingness by a range of actors to make changes in the production chain in the Danish construction industry. It has also shown that a key issue is to open up for primary change the space where the team of planners and management meets the team executing the work, or where the professional's culture meets the workmen's. One might say that changes have to be made where top-down approaches meet bottom-up approaches.

The learning process in interdisciplinary cooperation and reflection thus moves from technical rationality to reflection in action which in turn calls for an understanding of the necessity and appropriateness of the exchange of ideas which will arise in the dialogue between professionals and tradesmen and between the professionals and the tradesmen themselves. In conclusion, this calls for a thorough understanding of cultural lines of action, not least those specific to the construction industry.

Setting up more rules to govern the process is not the best line of action, as rules cannot totally govern actions. Here the distance between the logic of language and practical logic has to be addressed in its particular cultural setting.

References

- Kirkegaard P (2003): *"Sick leave in the construction sector: A heavy load for the national economy"*
BAT Kartellet. Copenhagen 2003
- Jungk R & Müllert RN (1984): *"Handbook in Future Workshops"*, Politisk Revy København
- Baarts C (2004): *"Knowledge and Skill – an anthological analysis of safety at a construction site"*. PhD thesis from The University of Copenhagen.
- Dam A, Pedersen EF & Elsborg S (2007): *BygSol, Cooperation and Learning in Construction Industry*. Final report. The Technological Institute. www.bygsol.dk
- Schön D (1983) *The Reflective Practitioner*. Basic Books. New York.

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Preventive Training in the Construction Sector

Introduction: regulations and research

For years, labour institutions and social actors alike have worked towards improving health and safety through different actions, including training. Article 12 of the EU Framework Directive on Health and Safety (the contents of which are implemented in Spain through article 19 of the Law on Occupational Risk Prevention passed in 1995), makes it obligatory for companies to provide training in this field at different stages in a worker's term of employment.

Aware of this need, the Fundación Laboral de la Construcción [Occupational Foundation for Construction] conducts research projects and training programmes in the field of occupation risk prevention in the sector. Thus, in 2006, it ran a project entitled, "Assessment of health and safety training in the building sector". This initiative was carried out in a setting in which investment in training was not reflected in a reduction in the incidence of accident rates.

The Project concluded that, although training contributes towards diffusing a preventive culture, the results of training are inadequate in terms of mainstreaming this culture into safe occupational behaviour. This is because it was found that there are different factors which limit its efficacy: complexity of the production process, fast pace of work, heterogeneous workforce composition, insufficient cover for certain groups, mobile character of works, presence of undeclared sources of work, excessive attention paid to legal

requirements without considering aspects that lead to efficient training, lack of a valid training certificate for all companies, non-standardised contents, certain attitudes of employers and workers, etc.

Continuing along this line, in 2007 the Foundation developed a project on “Best practices in health and safety training in the construction sector”. The project identified a series of programmes, which considered different aspects that favour efficacy in health and safety training.

Chronologically, these two projects have coincided with the development of regulations that are relevant to occupational health and safety training in the construction sector in Spain, and which aim to reduce occupational accident figures.

These regulations are twofold: Law 32/2006 governing subcontracting in the Construction Sector and Royal Decree 1109/2007 that implements it, and the 4th General Collective Agreement for the Construction Sector. Both regulations form the reference framework that serves to determine the training requirements in the field of occupational risk prevention for construction sector workers. This explains the specific effort in extending and improving the quality of training in the field of occupational risk prevention in construction that has taken place over the last two years.

One of the aims of the aforementioned Law 32/2006 is to promote training in health and safety at work amongst construction sector workers, by strengthening the guarantee afforded by training accreditation in the field of labour risk prevention in company human resources (at a managerial and production level alike). With regard to training quality, the aforementioned 4th General Collective Agreement for the Construction Sector defines the minimum contents of specific, initial training for a set of jobs, thus standardising training in this area. This training can also be certified and is acknowledged through the Professional Construction Card, which will be obligatory for all construction workers by 2012.

While the law on subcontracting is obligatory for all companies that deal with building works, the 4th Agreement only applies to companies that carry out activities in the construction sector, and it excludes self-employed workers.

Work on construction sites is carried out by companies that are included in the scope of application of this agreement, as well as by companies that fall beyond this scope because they belong to other production sectors (such as the metalwork sector). Below are the details of the obligations related to preventive training that human resources should provide in both types of companies, and the training that self-employed workers should also undertake. As can be seen, several of these provisions incorporate the results of the studies conducted by the Fundación Laboral de la Construcción.

Companies included within the scope of application of the 4th General Collective Agreement for the Construction Sector

Article 10 of the aforementioned subcontracting law and article 12 of the Royal Decree that implements the law specify that *“companies shall ensure that all workers who provide services in construction sites receive necessary training that corresponds to their job or function in the field of occupational risk prevention, so that workers are aware of the risks and measures to prevent such risks”*. Similarly, these articles state, notwithstanding the foregoing, *“collective sector agreements at a national government level may establish training programmes and specific contents for work in each speciality”*.

This possibility is provided for in both regulations has been materialised in the aforementioned 4th General Collective Agreement for the Construction Sector. Chapter III of Book II of this Agreement details the characteristics of preventive training in companies that are included within the scope of application.

Two training stages are established. The first stage is called “Permanent Classroom”, and it provides the minimum initial training in the subject that is specific to the construction sector. This stage comprises 8 teaching hours. Its main aim is for “workers to acquire the necessary knowledge to identify the most common occupational risks that occur during the different phases of carrying out construction work, as well as the preventive measures that should be established to eliminate or minimise such risks”.

The second stage is organised per job or trade. Per job, the following courses are established: company directors (10 teaching hours); site managers and technicians (20 teaching hours); middle management (20 teaching hours); prevention delegates (70 teaching hours); and

administrative jobs (20 teaching hours). With regard to training per trade, the following courses are listed, all covering 20 teaching hours: masonry, demolition and renovation; formwork; steel reinforcement; plastering; electricity; plumbing; quarrying; painting; floor and wall tiling; elevating machinery operators (in addition to the tower crane operator certificate and mobile crawler crane operator certificate provided for in other regulations); earth moving vehicle operators; manual equipment operators.

Finally, the Agreement includes a course on basic prevention in the construction sector. This course is organised in modules, in a similar way to that established in annexe IV of the Regulation on Prevention Services. It entails 60 teaching hours, as opposed to the 50 hours established for the same course in the aforementioned regulation.

In view of the above, the first stage would correspond to general preventive training related to the construction sector, and the second stage would cover more specific preventive training. To complement the two stages, and depending on the characteristics of the construction site and job in question, workers should also receive training/ information on the characteristics of that particular site and job.

In addition to the jobs and trades stated in the Collective Agreement, companies that are included within its scope of application also do other jobs and trades. The regulatory framework that covers the details of specific training in this field for jobs and trades that are not expressly stated in the Agreement (and should be considered in these cases) is Article 10 / 19 /of the Law on Occupational Risk Prevention. This article lays down that each worker should receive *"sufficient, adequate theoretical and practical training on recruitment, regardless of the type or duration of the job, and also in the event of changes in the functions undertaken or the introduction of any new technology or changes in equipment. Training shall be specifically focused on each worker's workstation or job, adapting to take account of new or changed risks, and shall be repeated periodically if necessary"*.

Companies not included within the scope of application of the Agreement

It is widely known that construction site activities involve a great

number of companies that are not included within the scope of application of the general sector agreement.

In order to determine preventive training for this set of companies, we must again refer to that provided in the aforementioned Article 19 of the Law on Occupational Risk Prevention. It is important to highlight that training must be specific to the risks pertaining to the construction sector, taking the company's activities in that sector as a starting point, and each worker's workstation or job. As mentioned above, this specific training must be complemented with training/information referring to the specific characteristics of the construction site and job in question.

It should be noted that section 2 of article 4 of the Law governing subcontracting in the Construction Sector, states that in order for a company to be able to intervene in the process as a contractor or subcontractor, it must, amongst other requirements, *"provide proof that it has managerial and production workers who are sufficiently trained in occupational risk prevention"*.

On the same line, Article 12 of the regulation implementing the aforementioned law on subcontracting (Royal Decree 1109/2006) provides that companies must have a prevention plan and be able to prove that it has workers who *"carry out managerial functions and have received the necessary training to incorporate occupational risk prevention in the course of their activities and decisions"*. *"This training may be obtained at any entity that is approved by the labour or educational authority in order to give training in occupational risk prevention, and such training shall have a length of at least ten hours"*.

Within this set of companies, there is a special aspect that affects those that are subject to Additional Provision One, "Posted workers within the framework of providing transnational services", again in the above mentioned regulation that implements the law on subcontracting. Workers belonging to these companies' workforces should receive preventive training corresponding to the national regulations transferred from Council Framework Directive 89/391/EEC, regarding the application of measures to encourage improvements in the safety and health of workers at work, and more specifically, article 12 of this regulation.

Self-employed workers

From a regulatory point of view, self-employed workers are obliged to fulfil that derived from article 24 of the Law on Occupational Risk Prevention, implemented through Royal Decree 171/2004 on business activity coordination.

In consequence of this, these self-employed workers must cooperate in the application of the occupational risk prevention regulation together with the other companies present on the construction site. Thus, they must supply the necessary information on the risks arising in their work, as well as applying preventive measures in order to eliminate or minimise them. Likewise, as provided in article 12 of del Royal Decree 1627/1997 on minimum health and safety regulations on construction sites, self-employed workers are obliged to apply the principles of preventive action, fulfil the minimum provisions established in sections 1 and 2 of article 29 of the Law on Occupational Risk Prevention (be alert with regard to their own health and safety and that of other persons who may be affected by their work, use protective resources and equipment correctly, etc.); use work equipment that meets regulations, choose and use individual protective equipment under the terms provided, fulfil the indications and heed the instructions given by the healthy and safety coordinator or site managers (where appropriate) during the course of work carried out on the construction site, and comply with the health and safety plan on the construction site.

In view of this, and considering the provisions in labour regulations, it can be confirmed that self-employed workers are not expressly obliged to have preventive training. However, it is increasingly common that in their contracts (referring to a commercial contract signed between the client, contractor or subcontractor and the self-employed worker), self-employed workers are required to have the necessary training in the field of occupational risk prevention, and this indeed is an appropriate criterion from a preventive point of view.

The case of self-employed workers who have paid staff working for them is worth mentioning. Since the two parties are bound by an employment contract, these employees have the same rights and obligations in the field of prevention as all other employees, and therefore, the self-employed worker has the same responsibilities as all other employers.

Summary

In order to improve health and safety at work and therefore reduce accident figures registered in the construction sector, it is necessary to encourage effective training in this field.

From a regulatory point of view, Council Directive 89/391/EEC (which is implemented in Law 31/1995 in Spain) determines companies' obligations to offer training in the field of occupational risk prevention. Individual Directive 92/57/EEC includes the obligation of informing workers about measures that are applicable on temporary or mobile construction sites (and in Spain this is implemented in Royal Decree 1627/1997).

Despite these regulations, studies conducted by the Occupational Foundation for Construction have demonstrated that efforts made in occupational health and safety training are not matched by improved accident figures. Therefore the Foundation has carried out research projects to assess training efficacy, and has since been able to detect and develop best practices that contribute to effective training in construction companies.

In this context, a Law was passed in Spain governing subcontracting in the Construction Sector. The Law states that one of the requirements for subcontracting is for company managers and workers to undertake training. Likewise, social partners signed the 4th General Collective Agreement for the Construction Sector (both coming into force in 2007), which determines the general and specific contents of such training, implementing a means to accredit health and safety training, known as the Professional Construction Card. These regulations aim to make progress by affording greater cover and efficacy in training, thus reducing accidents in the construction sector. The 4th General Collective Agreement for the Construction Sector solely affects companies and employees working in construction companies. Therefore, the terms of the Agreement with regard to training content and the obligatory nature of the professional card do not apply to self-employed construction workers, or to companies in other sectors that are involved in work on construction sites. However, these companies must provide proof of training through other means in order to be able to work on construction sites.

Worker Involvement in Health and Safety in Construction

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Introduction

Until the middle of the 19th century, master craftsmen employing journeymen and apprentices performed construction. These same persons undertook the planning of the work processes and methods. Thus, the planning and performance of the work was integrated. Three factors influenced the demise of the master craftsman system. First, increasing urbanization required different buildings; the value of land in urban areas dictated the construction of taller buildings. Second, scientific advances resulted in new materials and technologies: structural steel, elevators, indoor plumbing, centralized heating systems, etc. Each of these resulted in the creation of a new trade of craftsmen who performed the work. This Balkanization of the building process made it extremely difficult for a master craftsman such as a mason to construct a complete building. Third, the philosophy of the Industrial Revolution and Taylorism advocated the deconstruction of the building into its basic components, work planning by a staff of experts, identification of best practices, and work execution by groups of specialized tradesmen. Except for small facilities, the age of the master craftsman had ended.

During the latter part of the 20th century, managers, in their quest for greater efficiencies, experienced a frisson. The professional planners did not know as much about a job and how performance on that job can be improved as did the people performing that job. This realization that the pair of hands hired to lay brick or to build formwork came equipped with a brain was a revelation. Management interest in tapping this expertise grew until we had a new approach to management: worker involvement.

Worker Involvement

Workers not only know how to perform a job, but also how to perform it safely. In performing a task, the worker takes on the risk of injury or death and, clearly, wants to minimize that risk. Thus, that worker's expertise must be incorporated into any work plan. How that can and/or should be done is the question.

For the past thirty years, the UK has promulgated regulations regarding worker involvement in health and safety: The Safety Representatives and Safety Committees Regulations 1977; The Health and Safety (Consultation with Employees) Regulations 1996; The Health and Safety (Employee Consultation and Representation) Regulations 2003; The Management of Health and Safety at Work Regulations 1999; and The Construction (Design and Management) Regulations 1994. The forms of worker involvement addressed in these regulations range from the use of safety representatives to consultation and direct involvement.

With the financial support of the UK's Engineering Physical Science Research Council, the author conducted a study of worker involvement in construction health and safety in England and Scotland. Primary goal was to assess the feasibility of direct worker involvement.

The 1994 Construction (Design and Management) Regulations require each contractor to prepare hazard analyses and risk assessments termed task method statements for tasks to be performed on a project. These task method statements are prepared prior to the start of the project and become part of the pre-construction Health and Safety Plan. An examination of approximately 400 task method statements contained in pre-construction health and safety plans revealed that the great majority of them were generalized method statements that were not modified to reflect the specific conditions of a particular project. The pre-construction method statements are based upon assumptions about the site conditions that would be present when the work activities are to be performed. Construction sites are in a constant state of flux as project elements are completed. In addition, assumptions about activity sequencing and completion dates may not have been valid. Thus, the site conditions present when a work activity is to be performed may be very different from those expected when the pre-construction method statement was prepared. The pre-construction method statement must be evaluated at the time the work is to be performed and modified to reflect changed methods and/or conditions.

Preparation of pre-construction method statements and the evaluation and potential modification of them present two opportunities for worker involvement. The pre-construction assessments are typically conducted by the contractor's health and safety professionals. Assumptions are made about work methods

(crafts, tools, and equipment) to be employed and site conditions expected to be present. Operatives who may perform the work should be consulted and their input incorporated into the statement. At the time the work is to be performed, the craft foreman or supervisor and the operatives about to perform the work should review the method statement and evaluate its relevance to the current situation. For a variety of reasons, the work method(s) to be employed may have changed as well as the expected site conditions resulting in changed hazards and risks. Operatives must be participants in the assessment of hazards, resulting risks, and approaches to risk mitigation and control.

If a contractor employs a philosophy of continuous improvement, a third opportunity for operative involvement is present. Upon completion of a work activity, an assessment of the performance of the activity should be conducted to identify opportunities to improve future performance in terms of both production and health and safety. The operatives who performed the work should be consulted as part of this process.

Performance Model

Worker involvement can be modeled conceptually as
 Worker Involvement = f(Motivation, Opportunity, and Capability)
 Do operatives want to be involved in addressing health and safety issues, i.e. are they motivated? Individuals who believe that they have something material to contribute to the issue at hand and that their contribution will be treated seriously will be motivated to become involved. To become involved, operatives must have the opportunity to do so. Three opportunities were identified above. For these to become actual opportunities for involvement, contractors must solicit operative input. To do so, contractors must believe that operatives have the experience and knowledge necessary to provide valuable input. Capability must be viewed from the perspective of the operative as well as from that of the employer. Both the operative and the employer must perceive that the operative has the capability for involvement to occur. Unless the contractor believes the operative has the capability, the operative will not be given the opportunity; unless the operative believes he has the capability, he will not take advantage of an opportunity.

Group interviews were conducted on three major construction projects, two in England and one in Scotland. The overwhelming

majority of the participants expressed the desire to be involved in addressing health and safety issues. Those who did not believe that it was management's job to manage and the operatives' job to work.

Capability was assessed through an experiment. Three work activities on a project were identified and task method statements prepared for each. A panel of health and safety professionals to ensure that they represented best practice reviewed the statements. On each of three projects, a group of management personnel and one of operatives were drawn for each of the work activities. Each group was asked to prepare a task method statement for the work activity. The management and operative statements were compared to each other and to the "best practice" statement.

The operative prepared statements compared favorably with those prepared by management. Both captured the major elements of the best practice statement, but lacked some of the details, which can be attributed to the time allotted for the statement preparation on the projects. Operatives were more familiar with safety issues than with health issues. They were better able to discuss issues than reduce them to writing. The conclusion drawn from this experiment is that operatives are capable of participating in the preparation of task method statements and discussion of safety and health issues.

Summary

Operatives have the motivation and capability to be fully involved in the consideration of safety and health issues on construction projects. All they need is the opportunity to become involved. To facilitate this involvement, contractors should do the following:

- Increase the safety and health training provided to operatives.
- Provide training to both operatives and managerial personnel on involvement approaches, group dynamics, and other issues that promote effective involvement.
- Provide operatives with opportunities to be involved. In addition to the opportunities identified above, operatives can be given responsibility for conducting daily or weekly safety talks that address issues of relevance for the work being performed by the operatives and for conducting safety inspections.
- Provide rewards and recognition to operatives and to management and operative teams for performance and accomplishments.

It may be trite to say it, but the idea of “Together we can do it better” must become the operating philosophy for safety and health on construction projects.

Improving occupational health and safety and strengthening workers’ rights in the construction industry in Tanzania

Jill Wells,
Engineers
against Poverty,
UK

Current state of Construction H&S in Tanzania

In the low-income countries of sub-Saharan Africa the construction industry provides one of the main sources of wage employment for those with little education or training. But construction is also one of the most dangerous industries in which to work. On-site practices in countries like Tanzania are simply appalling. The little data that exists indicates that the majority of injuries and deaths in the industry are due to falls. Yet scaffolding is virtually non-existent, even on multi-storey projects in the main city, as the accompanying photograph demonstrates.

In addition to the risk of an accident, the health of construction workers is very likely to be damaged by exposure to dust, noise, vibration or chemicals, the effects of which may take many years to develop. Construction workers in Tanzania are also particularly vulnerable to HIV/AIDS due to over-representation of young men in the workforce and long periods spent away from home. Hence, while securing a job in construction offers a potential route out of poverty, subsequent inability to work due to workplace injury, ill health or HIV-related infections may plunge the workers and their families back into destitution, or even threaten their very survival.

New legislation was introduced in Tanzania five years ago designed to strengthen workers’ right to a healthy and safe workplace¹. The legislation requires all employers to have in place an effective Health and Safety (H&S) policy, to appoint H&S officers and workers’ H&S representatives at workplaces with more than 20 employees and to establish H&S committees where there are more than 50

employees. However, the majority of workers are still unable to take advantage of this, due to a variety of factors. Chief among these are poor enforcement of the regulations, the casual nature of employment in the industry², weak or non-existent trade union presence and, above all, a complete lack of knowledge of H&S issues among the workers themselves and among the other key industry stakeholders - clients, engineers, architects, contractors, subcontractors and project managers.

Need for Training

Last year Engineers Against Poverty (EAP) succeeded in obtaining funding from the Department for International Development, through its Civil Society Challenge Fund, to support a project, which aims to change this situation. Based on an ILO pilot, the project is providing intensive training in construction H&S to a core group of men and women drawn from all the major stakeholder organisations. The idea is that this core group of 15 to 20 trained people will then be assisted to train others amongst their peers, co-workers and employees. Workshops will be held at regular intervals in all the major towns in the country and on large construction sites in rural areas. In the five years of the programme it is hoped to reach, directly or indirectly, all of the contractors and consultants and a large proportion of the 200,000 construction workforce, most of who are employed as 'casuals'. The project aims to raise awareness among this vulnerable group and those who employ them, of their entitlements and rights under the law and empower them with the essential technical knowledge that is needed to realise those rights.

Project implementation

Responsibility for implementing the project is shared between EAP and our local partner, the Institution of Engineers Tanzania (IET). Advertisement by IET yielded a response from 88 Tanzanians wishing to become trainers in construction Health and Safety (H&S), from which 19 were selected. Among the group are representatives of all of the key organisations involved in the construction industry and in promoting occupational H&S in Tanzania. These include the Occupational Safety and Health Authority (OSHA), the Tanzania Occupational Health Service (TOHS), the National Construction Council (NCC), the Contractors Registration Board (CRB), Tanzania Civil Engineering Contractors Association (TACECA), Tanzania Mines

and Construction Workers Union (TAMICO) and the Tanzania Informal Construction Workers Organisation (TAICO). By including key members of these organisations in our first group of trainers we are expecting to encourage 'buy-in' to the programme from all of the institutions with responsibility for raising the standard of health and safety in Tanzanian construction.

The group also includes representatives from two of the main educational institutions responsible for the training of engineers and construction managers and technicians, (the College of Engineering and Technology at the University of Dar es Salaam and the Dar es Salaam Institute of Technology). Participation in the training programme by key staff members of these institutions is expected to facilitate the mainstreaming of H&S training into professional and technical education. Participation by two senior officials of the Institution of Engineers will also facilitate introduction of H&S into Continuing Professional Development (CPD) courses for Tanzanian engineers. In this way we hope to build sustainability into the project.

The 19 potential trainers have now completed and passed an international certificate course, the 'managing safely' course of the Institute of Occupational Safety and Health. They have also received intensive practical training in 'Teaching and Learning' methods. Currently a small group from among the trainers are preparing materials (in both English and Swahili) for the delivery of training to contractors, workers and consultants. In the next few months these will be tested in pilot training sessions with the various groups before rolling out a programme of training across the country during the next four years.

Other measures: Sanctions and Incentives

Increased knowledge is, of course, unlikely to be sufficient on its own to change behaviour. *Incentives* to comply with the regulations and *sanctions* for non-compliance are also important. The development and implementation of *sanctions* largely rests with the enforcing agents, particularly the Occupational Safety and Health Authority (OSHA) and to a lesser extent the Contractors' Registration Board (CRB). The project is helping to build the capacity of these organisations by training some of their staff. OSHA is also receiving support from the Danish Aid agency, DANIDA. But even when OSHA is fully staffed and equipped, its ability to inspect the

myriad of construction sites across this huge country will inevitably be limited. Incentives are therefore also required.

Scope for the development of *incentives* for compliance may be found within the procurement process. The newly formed Public Procurement Regulatory Authority (PPRA), OSHA and other stakeholders are collaborating to develop and implement new ways of reinforcing construction workers' rights through procurement procedures and contract documentation. There are two key measures under discussion:

- that the policies and performance of contractors on H&S issues is evaluated at tender stage and contractors with poor records and/or inadequate policies excluded from tendering
- that the detailed requirements for H&S on a project are spelled out in the specification of works and included, wherever possible, as separate items in prime costs in the Bills of Quantities.

In pursuit of these objectives, OSHA has already developed a '*pre-tender Occupational Safety and Health qualification criteria*' whereby contractors bidding for all Government projects are required to comply with all provisions of the Occupational Health and Safety Act. Contractors bidding for medium and large projects must also be able to demonstrate that they have a H&S management system and training programmes in place and a good track record on H&S issues. A risk assessment and project specific plan will also be required to be submitted with tender documents.

Conclusion

Raising the standard of occupational H&S in the construction industry requires concerted efforts from a large number of stakeholders, most of all pressure from the workers themselves. In Tanzania, the high level of unemployment and casual nature of work in the construction industry means that organisation amongst construction workers is weak and workers are generally unaware of their rights. The project is based on the premise that increased knowledge of H&S issues and their rights and entitlements under the law will help workers to demand greater protection in the workplace and other stakeholders to be aware of what is required to provide this. If backed up by appropriate action in the award and implementation of contracts, significant improvement could be obtained. The expected outcome, when all pieces of the jigsaw are in place, is increased compliance

with Health and Safety regulations in the construction industry, contributing to fewer accidents and a general improvement in the income, health and wellbeing of construction workers.

Workers preparing to plaster a wall at 6th floor level, Dar es Salaam. (class 1 (Chinese) contractor)



1. The Occupational Health and Safety Act, 2003, Government Printer, Dar es Salaam
2. Research commissioned by ILO in 2004 found up to 95% of workers on large construction sites were employed as 'casuals', see *Baseline study of labour practices on large construction sites in the United Republic of Tanzania*, study coordinated by the National Construction Council, Dar es Salaam, Sectoral Activities Department Working Paper no. 225, ILO, Geneva 2005: <http://www.ilo.org/public/english/dialogue/sector/papers/construction/wp225.pdf>

Discussion

Hans Baumann,
UNIA

Roland Erne's Book on European Unions and Democracy

In his book on 'European Unions' published just a few weeks ago Roland Erne assesses the capabilities of unions to act across borders and demonstrates how unions can contribute to the development of a more democratic European Union. In this work Erne draws on his experience as a social scientist accumulated at various European universities but also on his background as a former union official in a number of European countries. His work is based on a broad spectrum of research methods, including 87 interviews with unionists, works councillors and business consultants at local, national and European levels. At present Roland Erne is a lecturer in International and Comparative Employment Relations at University College Dublin.

Possible trade union strategies

Erne's starting point is the frequently described "democracy deficit" in the European Union which particularly in recent years has led many citizens to question the European integration process. More democracy and more citizen participation in political decision making are important factors for improving the legitimacy of political institutions, in particular at the level of the European Union. As important actors of civil society, trade unions with their democratic structures and capacity to mobilise their members can make a valuable contribution to a more democratic Europe if they increase their transnational activities.

In the context of the tense relationship between national politics and social relations, on the one hand, and the European integration process, on the other hand, Erne identifies four potential trade union strategies: namely a Euro-democratic or a Euro-technocratic one, a technocratic or a democratic re-nationalisation one. Unions can rely on European-wide mobilisation and transnational cooperation and politicise the EU decision-making process in the European public sphere. This would be the strategy contributing to the democratisation of the European Union. European unions, however, can also exclusively depend on lobbying in the regulatory governance structures of the European Union and on using the existing institutions of the 'Social Dialogue' (as the institutionalised

forms of social partnership are called). This Euro-technocratic orientation has been followed primarily by the European Trade Union Confederation (ETUC).

A strategy perfectly successful in the short run may also be a retrenchment of union action to the national level (re-nationalisation). This means that trade unions focus on the national level, because here they can still make better use of their bargaining power. This was typically one of the main strategies of the Nordic trade unions. The primary aim remains, though, confronting the neo-liberal EU-project by national left-wing or at least Keynesian policies. For a long time a typical example of this was the national fight for the 35-hour-week of the French trade unions. And the Nordic trade unions have tried in this way to conserve their special Nordic model of social partnership.

According to the technocratic re-nationalisation option unions try to provide or maintain the competitive advantage of their national economy by restricting wage demands and concluding 'social pacts' with employers and governments. Hereby they hope to increase economic growth and to maintain or create jobs in their own country at the expense of the other European countries. This strategy was pursued for instance for some time in the Netherlands ('Poldermodell') or by the German DGB. Similar tendencies exist also in Central European accession countries in order to maintain the existing competitive advantage of low labour costs.

Re-nationalisation failed

The latter strategy was partly imposed on unions in the 1990s through the so-called convergence criteria of the Maastricht Treaty. The EU-stability criteria as a precondition for entry into the monetary union forced the states to restrict their budgets and wages. In his analysis, Erne shows that, in seven of 14 old EU-countries, a strongly corporatist re-nationalisation strategy of trade unions can be identified. This included also restraint in wage negotiations such as in Belgium, Finland, and Austria. Germany, Italy, Netherlands, Ireland,

The overall result was a disaster for the European trade union movement. The wage-cost competition triggered a wage dumping spiral, real wages stagnated or declined, the wage quota (i.e. the share of wages in gross national product) markedly declined in

Europe, the re-distribution between poor and rich, from employees to employers and owners of assets accelerated. Moreover the trade union movement suffered a reduction in its potential of mobilisation. In most countries (not in all) trade union density declined. This trend was even more pronounced in terms of the number of days of strikes. These have declined in Europe since the 1980s, from 218 to 66 days of strike per 1,000 employees.

By the end of the last decade the wage dumping spiral forced unions to rethink their national strategies and to seek a closer cooperation at transnational level. Erne shows how different transnational trade union strategies can work out, by taking the example of transnational coordination of collective bargaining policy and trade union action in two company mergers.

Trade union policy between technocracy and democracy

About the end of the 1990s the European Metal Workers' Federation (EMF) and the so-called Doorn-Countries (Benelux and Germany) developed mechanisms for an improved coordination of their collective bargaining policy. This implied setting targets to be achieved in wage bargaining in individual countries. Later on such collective bargaining benchmarks were adopted also by the European Trade Union Confederation for the national umbrella organisations. Setting such minimum requirements for national collective bargaining aimed at stopping the wage dumping spiral and pursuing a common European wage policy. Later again attempts were made towards a European minimum-wage policy, actively supported most recently by the Swiss Trade Union Confederation and UNIA.

The progress of these attempts at coordination as opposed to 'beggar-your-neighbour' policy is not contested by Erne. However, he classifies this approach as Euro-technocratic, because a mobilisation strategy was not pursued at the same time. Whilst the coordination approach allowed for the inclusion of individuals in charge of national bargaining, national shop stewards were hardly involved. Up to date the resonance of these measures in sectors and enterprises of the individual countries and the success of these coordination attempts has remained limited.

As a positive counter-example Erne presents the strategy of the European Federation of Building and Woodworkers (EFBWW). Since 1994 this federation pursued a European strategy for the

enforcement of national standards for labour immigrants in order to prevent wage dumping through migrant employees. Based on organised lobbying but also on the mobilisation of the membership, the EFBWW in cooperation with the ETUC managed to get the 'Posting of Workers' Directive' enacted and then also to fight successfully against the 'EU-Services Directive' which undermines these principles. Moreover the EFBWW actively supports attempts at transnational coordination of collective agreements and the organisation of construction workers.

The focus was on achieving co-determination and minimum conditions on large international construction sites, where firms and employees from many countries were present. The Swiss Alptransit-sites were part of this project. In contrast to the coordination approach of the EMF and ETUC, the EFBWW succeeded in mobilising works councillors and shop stewards of the national trade unions and thus to integrate them in the efforts for developing a European trade union policy.

European Works Councils as agents for democracy

Taking the example of two large mergers in Europe and the respective actions of the European Works Council (EWC), Erne demonstrates different forms of action. These case studies are dealt with in great detail. Both the ABB-Alstom and Alcan-Pechiney-Algroup (APA) merger cases involved companies and unions from the same sector and the same countries. In the APA case the EWC and trade unions adopted the Euro-technocratic approach in that they lobbied the European Commission in order to prevent the APA merger and the loss of jobs. This strategy eventually failed as, without an adequate mobilisation vis-à-vis the Commission and the powerful General Directorate for Competition, no pressure could be built up. In the case of ABB-Alstom, however, the EWCs and the trade unions chose a different Euro-democratic strategy. There was a common mobilisation and numerous rallies involving the employees of many European establishments. Thus pressure could be raised not only on the French government but also on the Commission, who had to agree eventually to public support for the maintenance of jobs at Alstom's.

The interesting point of the last example: in both cases the same trade unions, the German IG-Metall and the French CGT and CFDT commanded the strongest influence within the APA and ABB-

Alstom EWCs whilst, nevertheless, their representatives pursued entirely different strategies in the two merger cases. Erne explains this through the different cultures in the respective companies and through the fact that, for a successful Euro-democratic strategy, it is necessary that the actors, i.e. the EWC members and trade union experts involved, know each other well and have already set up a functioning network of relationships, which obviously was the case at ABB-Alstom.

Based on the fact that in both cases the EWCs and trade unions involved played an active role in the restructuring of companies, Erne concludes that at least at the level of companies the EWCs could play a leading role in the democratisation of Europe. Given the many 'dormant' EWCs, not having the slightest influence on group politics, and the vague competence conceded to the EWC by the EWC Directive, this may be a slightly too optimistic conclusion. Nevertheless, such active transnational trade union networks, which include also parts of national shop-stewards and are able to interfere actively in EU labour market policy, would be a decisive and necessary contribution to the democratisation of the European Union. This, last but not least, is also indispensable for the future of the trade union movement. For, if more and more free-market technocracy and right-wing nationalism replace the processes of democratic decision making, there will be no space any more for independent trade unions.

(Translation: Jörn Janssen, Roland Erne)

Reports

NO **STRESS!**

Dario
Mordasini,
Mattia
Mandaglio

Switzerland: a campaign on the building sector by the trade union Unia

35.4% of employees in Europe consider that work damages their health, and in Switzerland too the proportion amounts to 31.1%! ⁽¹⁾ Occurrences and findings like these stimulated the delegate conference of the building sector (the "building workers parliament") of the trade union Unia to conduct an extensive inquiry on the theme of "job safety and health protection in the building sector", with the direct involvement of the workers themselves (a premiere for Switzerland).

In 2006 1,466 building workers took part in the extensive inquiry (in seven languages) into job safety and health protection. The topic "stress on the job" ran like a red thread through the many discussions held. Some significant findings from the inquiry can be analyzed from this perspective. 'Stress' is understood as the *"imbalance between the requirements of a work routine and the available resources"* and 'stress accomplishment' as *"restoring the balance between requirements and resources"*.

Health problems more important than accident risks

14 accident risks and 17 health problems were analysed with building workers. Particularly remarkable for an accident-pregnant industry like the building sector is without doubt the fact that the workers directly concerned place health problems in a higher position than accident risks: 27.5% stated that they are 'always/often' exposed to the health problems analysed, whilst with accident risks the figure was "only" 10.7%.

To explain this result it is important to note that the prevention of accidents at work was extended in recent years and workers have

the perception that more resources are available for prevention. In contrast, health protection clearly requires new and effective action, from the starting point that construction work can also make people ill.

In the inquiry it emerged that work situations leading to crashes / plunges constitute the most important accident risk: 13.9% of those asked deplored the too-frequent use and invariable unsuitability of ladders, whilst 12% were uncertain. With regard to health problems, the most frequently mentioned causes are dust (49% answered "always"/"often"), noise (45.1%) and cold weather (40.6%).

Accident risks and health problems are not without consequences for building workers: 65.8% complained of work-conditioned back problems, 45.6% of stress, and 38.3% of general tiredness. At European level these complaints are also the most frequently mentioned work-conditioned impairments of building workers.

Very impressive in this context is for us the following result of the inquiry, pointing to the still predominantly passive (almost resigned) behaviour of workers in relation to health problems in the building sector: to a question asking how they react to health impairments, 43.3% answered "I hang in there" and 28.2% "I take medicines (analgesics)".

Strong increase in the pace and intensity of work

For 46.8% of the building workers the pace and intensity of work has increased significantly in recent years. The first cause of this situation (40.4% of all answers) is the strong decrease in the number of workers on building sites. The magnitude of the problem is confirmed by the responses of building workers at European level: 72.7% of those asked complained about the high pace and intensity of work extending over a quarter of their work time⁽¹⁾.

Missing qualifications in the work-teams

It is not just the quantitative reduction in personnel that causes problems for workers. A lack of quality and/or qualifications also contributes to problematic situations in the building sector: over 60% of those asked considered that their own team did not always contain all the qualified persons necessary to attend work correctly

to the work and according to regulations.

Unsatisfactory labour organization

For a third of the building workers (32.3%) labour organization in their own firms is insufficient. Significant to us is the fact that building workers representing this opinion suffered 17.6% more accidents at work and were clearly more likely to be working under conditions of stress (+32.7%).

Inclusion (co-operation) and instruction are insufficient

Responses concerning training and instruction in job safety and health protection on the job are without doubt surprising and very important: 58.6% reported that no training courses or information meetings on job safety had been held in their firm in the last twelve months (before the questioning). Suggestions for improvements in job safety made by the workers were 'not examined' for 31.3% of those asked and, for a further 36.4% 'only rarely'.

Inclusion during the legal execution of the contract is insufficient

40.4% of workers asked were not informed about the reports made by the authorities on the occasion of control visits to the company. Only 39.5% reported that workers representatives or a workers' delegation were included in these control visits.

Conclusions

Three conclusions from the evaluation of the results of the inquiry have for us priority:

Holistic prevention approach

The results of the inquiry show clearly that in a holistic prevention approach must be set up for the whole chain of the building process. For Unia this means acting on six levels:

1. Basic conditions (laws, procedure of assignment, public work...)
2. Co-ordination (co-operation between the different companies)

- working on a building site)
3. Planning / Organization (job preparation)
 4. Co-operation / Training (inclusion of workers directly concerned in all phases)
 5. Preventive measures TOP (Technical, Organizational, Personal measures)
 6. Control (implementation of the legal guidelines)

Optimization of relationships

Too often in job safety and health protection on the job measures are privileged which aim to change the individual behaviour of the subjects. The results of the inquiry make clear that relationships in the workplace (collective behaviour) must be much more strongly and critically examined and optimized.

Collective approach

Recognize job safety and health protection at all levels and with all participants as a collective and not an individual task, that is an indispensable condition for effective prevention in the building sector.

Further action

The trade union Unia has begun to discuss the results of the inquiry with all interested parties, in order to accomplish a broadly supported prevention campaign for the building sector under the title "NoStress".

Detailed results of the inquiry: [www.unia.ch http://www.unia.ch/NoStress.2266.0.html](http://www.unia.ch/NoStress.2266.0.html)

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(1) Fourth European Working Conditions Survey – European Foundation for the Improvement of Living and Working Conditions, Dublin 2005

A Framework of Flesh: Builders' labourers battle for health and safety

A framework of flesh is the opening installment from researching builders' labourers and their unions in Australia. Although the investigation glances back to convict times, the story gets started around the 1870s. This volume takes up matters vital to those workers: their safety, health, amenities, benefits, compensation and legal standing.

Construction has been less terrible only than mining and transport for the damage that its operations have wrecked on life, limb and longevity. Among building workers, the tasks of a labourer remain more hazardous than those of most tradesmen. Rates of injury to building workers were halved between 1971 and 1985, but for labourers the incidence was a third higher. By early 1987, the Building Workers Industrial Union in New South Wales had 28% of its members as building labourers but they made up about 70% of the compensation claims handled by the union office.

The history of builders' labourers could be told through their struggles for safer and healthier workplaces. After five State unions federated in 1910, the Branches endorsed a Log of Claims which gave as much attention to amenities, safety and compensation as to hours and wages.

OHS concerns are far from the whole story of builders' labourers. Disputes over scaffolding and asbestos never happen in isolation, but are linked to the struggles to limit hours, to prevent speed-ups and to improve wages, such demands are as much part of health and safety as is a Portaloo or a scaffolding inspector. Hours and wages will be taken up when writing about the union as an organisation in an account to be called *We built this country*. A third volume will explore the composition and behaviour of rank-and-file labourers and their officials, titled *Weird Mobs and Nomad Tribes*.

The title for this volume, *A framework of flesh*, comes from the memoirs of an Australian labourer, Charlie Sullivan, who, in the

1920s, drew on his fifty years as a union activist: “few ever think of the great and humble army whose sweat and blood are mingled in the concrete and bricks as surely as if the walls were built over a framework of human flesh.” *A framework of flesh* will put the daily doings of labourers front and center, from their on-site experiences and, as often as possible, in their own words. The material is presented in four parts.

Part One - Dangers high and low

The first section surveys the sources of injury, with scaffolds as the crux of that concern and the capitalists’ resistance to their inspection as an exemplar of exploitation. For a builder’s labourer, no workplace demand has held more importance than secure scaffolding. Indeed, injuries and deaths around scaffolding have been so persistent that building workers could be forgiven for associating “scaffold” with place of execution.

Chapter 1 19th century

The chapter sketches the deathtraps of an industry unregulated by the state and largely unchecked by organised labour.

Chapter 2 1900-50

The chapter documents the rate and range of injuries, the employers’ resistance to Scaffolding Acts and to adequate inspection, and effort of the Builders Labourers Federation (BLF) to overcome both while educating a membership with high levels of churn in a period when concrete introduced new hazards.

Chapter 3 The harder they fall 1950-2000

Injuries boomed along with the economy on major projects such as the Snowy Mountains hydro-electricity, inner-city high-rises, mining projects and Melbourne’s Westgate Bridge, the collapse of which in 1970 took 35 lives. Although contractors and unions supported the wearing of helmets, self-criticism from a handful of employers did nothing to stem the labourers’ assault on managerial prerogatives over on-site safety and conditions. That surge of worker control led to the BLF’s deregistration in 1974. By 1990, all States had passed Robens-style Acts, while placing greater responsibility on employers to ensure safe working environments.

Chapter 4 Frameworks of fear

This chapter examines the place of occupational health and safety

(OHS) in the on-going effort to destroy the Construction Division of the Construction, Forestry, Mining and Energy Union (CFMEU) through the 2002-3 Royal Commission and granting its successor police powers comparable to those against terrorists. Those laws deprive officials most rights-of-entry while trumpeting the ability of market forces and risk assessments to reduce injury levels that remain 2-3 times greater than among the rest of the workforce.

Chapter 5: Dangerous knacks

All builders' labourers suffer from what they shrug off as the "usual bangs and scrapes, the usual little things that don't stop you working." If injuries were no worse than cuts and bruises, this study would not have been written. To understand why the building trade has been the cause of so many deaths and so much disablement, we need to examine the minute-by-minute experiences of particular categories of labourers. Chapter five presents snapshots of three hazardous kinds of labouring – demolishers, hod-carriers and dogmen. An historical approach tracks the persistence of Dodgy Bros and accounts for the disappearance both of the hod and of riding the hook. Demolishers and dogmen had the highest number of fatalities. Dust exposed demolishers to respiratory diseases that killed them decades later. Hod-carriers also died in falls and survivors limped away with industrial rheumatics.

Part Two - Disease, dirt and discontent

The significance of industrial diseases and on-site amenities are examined in part two.

Chapter 6: Health and diseases

For every labourer killed on sites, ten more die from work-related diseases. This chapter touches on nine aspects of health and safety, beginning with the paucity of research, before surveying silicosis, asbestosis, poisons, dermatitis, hearing loss and skeletal damage. The discussion then shifts to provisions for inclement weather and the dilemma of dirt money before ending with yet more resistance from employers to safety regulations.

Chapter 7: Amenities

A seventh chapter sketches other aspects of building sites which affect health and safety, from lavatories to hot lunches. The effort to improve amenities is examined through the provision of sheds,

food, and water, both hot and cold. The policy of pursuing dirt money and disability allowances to compensate for bad conditions is re-considered. The chapter concludes with five battles for civilised conditions: constructing the national capital at Canberra and the Victorian Electricity Commission in the LaTrobe Valley in the 1920s; Civil Construction during the Pacific War; infrastructure for resources projects in Queensland and high-rises during the 1960s. Although amenities are discussed separately from health and safety, they are connected in practice.

Part Three - Helping hands

The third section of *A framework of flesh* shows how labourers have softened the damage done to them by providing for each other, and by battling for compensation.

Chapter 8: Benefits

This chapter looks at three ways in which labourers have supported each other against the consequences of harm at work. General comments on BLF relief funds are followed by an account of funeral benefits, and ends with provisions for “slow workers”.

Chapter 9: Compensation

Reforms to the legal protection for injured workers came in two stages. In 1882, New South Wales followed the British parliament in introducing an Employers’ Liability Bill. The inadequacies in that approach gave rise to Workers’ Compensation Acts after 1900. The change in titles indicated that union pressure was tilting the onus of proof from worker to capitalist. The chapter follows unionists as they fought to improve compensation for the injuries discussed in the preceding chapters, culminating in the 1970s with the winning of average weekly earnings paid as soon as the labourer went off work. This recounts the resistance by Messrs Construction Capital to paying for their pounds of flesh, abetted by lawyers and insurers. Hence, the chapter on compensation concludes with an historical sweep to reinforce the earlier account of scaffolding.

Part Four – “Killing no murder”

The fourth and final section looks beyond the building and construction industry to locate occupational health and safety within the needs of capital as advanced through its legal system.

Chapter 10: “Killing no murder”

More than buildings rise on “a framework of human flesh”. So too do the profits of Messrs Construction Capital. The previous 80,000 words carry our understanding of that process to the level of generalisation. The next step is to re-conceptualise the evidence by asking whether the ill-logic that compels capital to expand also requires it to feed off human capacities. The persistence of OHS offences makes sense once located within the dynamics and structures of capitalism. The analysis proceeds through four phases. The first is a reminder that the harms suffered by workers are a microcosm of the violent history of capital accumulation around the globe. The second section integrates the prevalence of workplace injuries with the mechanisms that capital relies on to expand. A third section documents the class bias in the operation of OHS laws where offences are restricted, prosecutions rare, convictions even more so, and penalties light. The chapter concludes by showing why “legal reasoning” premised on “intent”, “equality before the law” and “individualism” cannot treat OHS violations as “really criminal”, a truth exemplified in the failure to legislate for industrial manslaughter.

Labourers improved their health and safety from the 1960s as the BLF revived into a fighting union. When Federal Secretary Gallagher looked back on 30 years of the Federation’s successes in campaigning for safety, he identified three factors: “united action and education of workers on a job-by-job basis, pressuring individual employers, and by introducing health and safety as a bargaining tool during wage negotiations.” Of that trio, the key became rank-and-file control over when it was safe to work. If the rate of harm remains so high after 200 years of battling for health and safety, how much more deadly would capital have been if left to self-regulation? Hope resides in recognising how many injuries have been prevented by the willingness of labourers to defend each other by defying a legal system where assault is not a crime if done for profit.

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The mainstreaming of occupational health and safety into education and training in Europe: the role of the European Network Education and Training in Occupational Safety and Health (ENETOSH)

Abstract

This article briefly describes developments for the mainstreaming of occupational safety and health into education and training in Europe. It makes particular reference to the European Network Education and Training in Occupational Safety and Health (ENETOSH). The objectives, tasks and results of this EU project are described. The article concludes by identifying the elements necessary for a coherent European strategy for the mainstreaming of occupational safety and health into education systems in Europe.

Background

Discussion of the mainstreaming of occupational safety and health into general and vocational education and training at European level was delayed by almost ten years. As early as 1986, the Council of Europe, together with the education ministers of the Member States, had issued a resolution on the mainstreaming of consumer education into primary and secondary education. This was followed three years later by a resolution concerning health education in schools. Not until the mid-1990s did safety in schools become an issue at European level: in 1995, the European Commission adopted the SAFE programme of non-legislative measures to improve health and safety at work, and the first European conference on the mainstreaming of occupational safety and health into the education system was held in Dublin in November 1996 under the Irish EU Presidency¹. This development in OSH was supported by a clear commitment on the part of European education policymakers to the principle of lifelong learning².

In 2002, the European Agency for Safety and Health at Work in Bilbao launched a project to mainstream occupational health and safety into education, and organized a conference on "Learning

about OSH" under the Spanish EU Presidency. The results of this conference were incorporated directly into the 2002-2006 Community strategy on health and safety at work. This Community strategy marked a turning-point in occupational safety and health: education and training were defined as key factors in the development of a genuine culture of risk prevention in Europe³. At its first meeting in 2003, the "Mainstreaming OSH into education & training" Contact Group founded by the European Agency discussed the draft of a possible strategy for the mainstreaming of occupational safety and health into education. The result of this discussion formed the basis for the Rome Declaration, which was published in Rome on 3 October under the Italian EU Presidency. At the end of its second meeting, held in 2004 in Dresden, the Agency Contact Group called for the creation of a European network for education and training in occupational safety and health⁴.

ENETOSH: a European network for education and training in occupational safety and health is created

In October 2005, the "European Network Education and Training in Occupational Safety and Health (**ENETOSH**)" commenced its activities in the form of a project sponsored by the European Commission as part of the LEONARDO DA VINCI education programme (term: 10/2005 – 09/2007). The network currently comprises 30 partners from 15 European countries. It is supported by an advisory board in which the European Agency for Safety and Health at Work, the European social partners in the construction sector, and the partner networks ENWHP and ENSHPO are represented, together with other bodies. The network is co-ordinated by the BGAG Institute Work and Health in the German Social Accident Insurance (DGUV). In addition to the European network, national networks are being set up in some countries, including the Czech Republic, Austria, Portugal and Germany.

ENETOSH is conceived as a permanent transnational network of training and OSH professionals involved in OSH education and training. The network assures, consolidates and systemizes the level of experience gained to date in Europe in the area of OSH education and training, and facilitates access to and discussion of model good practices and innovative training methods. ENETOSH also develops standards of competence for instructors and trainers in occupational safety and health, in order to improve the quality of tuition and to promote the process of mainstreaming occupational safety and health into education and training. In the

long term, ENETOSH thus contributes towards reducing the accident and occupational illness rates in companies and in public facilities, primarily among young workers, but also among older employees.

ENETOSH is committed to an integral approach to the mainstreaming of occupational safety and health into education and training. This means that ENETOSH encompasses all phases of lifelong learning, i.e. all levels of the education system, from kindergarten and school, through vocational and higher education, to vocational further training.



The integral approach of ENETOSH

ENETOSH implements the entire spectrum of possible intervention measures: from the provision of information, through awareness-raising campaigns, the incorporation of occupational safety and health into curricula, extracurricular measures, behavioural training, and programmes for promotion of a prevention culture in educational institutions and companies. Central to the network's creation is the issue of what form a strategy should take which is to permit and promote the incorporation of OSH into all phases of education and all areas of society⁵.

ENETOSH: how the European education and training network functions

The members of the network are organized in multinational and interdisciplinary groups of experts. The examples of good practice for example are collected by four groups of experts, each representing one of the areas of education. Each group of experts is co-ordinated by a member of the network. In addition to a catalogue of criteria for

selection and analysis of the good-practice examples, an editorial committee assures the quality of the material published on the ENETOSH Internet platform (brief descriptions, contact data, links, product information, video clips). A biannual two-day workshop is held at which topics of common interest are discussed and experience pooled. At the last workshop, held in Dresden in July 2007, one of the issues discussed was how the good-practice examples could be used to formulate possible principles for the successful mainstreaming of occupational safety and health into general and vocational education in Europe.

The annual Training & Innovation event is traditionally held at the BGAG in Dresden, following on directly from the summer workshop. Training & Innovation has been held since 2003 in conjunction with the European Agency, and provides OSH and education experts with an opportunity to pool information at a personal level. The 7th Training & Innovation 2007 was devoted to the standardization of education and training in occupational safety and health. In addition to representatives of the European Commission and the European Agency, 80 experts from a total of 19 countries attended the event. The sessions ranged from papers discussing principles in the area of standardization and certification to presentations of good-practice examples from a number of European countries and for all educational levels⁶.

The work of developing the ENETOSH standards of competence was also conducted in mixed groups of experts. In the run-up to development work, two working papers were produced in the network: the first on changes in the world of work and their influence upon the requirements for competencies in occupational safety and health⁷, the second on the development of standards for teaching staff in the OSH area. The latter of these working papers compared existing educational standards in Finland, Austria and Poland and described the principles of the European Qualification Framework (EQF)⁸. Based upon this preliminary work, areas of competence were first defined for which the skills, knowledge and further personal competencies required of teaching staff were then formulated in a second stage. In a third stage, the competencies were assigned to the levels of the EQF.

ENETOSH: the results of the European education network

One of the most important results of the work in the network to date is the personal contacts forged within it during co-operation on specific tasks. In addition, the network has added 17 new partners and 5 further countries to the original 13 project partners

within the projects term. This trend suggests that the network may continue to grow in the future. Since its launch in April 2006, approximately 300 examples of good practice have been published on the ENETOSH Internet platform. Of these, just under 50 have also been described in detail. The news page of the ENETOSH platform is continually updated with the latest information on the mainstreaming of occupational safety and health into education and training in Europe. A "Who's Who" currently listing 80 training and OSH experts completes the resource⁹.

Within the ENETOSH project, a standard of competence for OSH educators and trainers has been developed. The ENETOSH standard covers the following fields of competence:

1. Education and training
2. Safety and health at work
3. Workplace health promotion

OSH Management.

The standard of competence is supplemented by checklists for trainer assessment. These checklists provide teaching staff with a tool for assessment of their own competencies, and education and training bodies with an aid to selecting teaching staff. The referencing of standards to the levels of the European Qualification Framework (EQF) simplifies comparison between the qualifications of OSH teaching staff across Europe.

Conclusion

If a risk prevention culture is to be developed which permeates all levels of the education system, it is essential that the experience and expertise gained with examples of the mainstreaming of occupational safety and health into education and training in Europe be brought together. As early as 2004, the European Agency for Safety and Health at Work presented a model describing key factors for the success of mainstreaming¹⁰. Since the European "Safe start" week in 2006, the mainstreaming of occupational safety and health into general and vocational education has become an established concept in the majority of EU Member States. What remains lacking, however, is a clear, common European strategy for the mainstreaming of occupational safety and health into the area of education policy. Such a strategy could address key aspects of the Rome Declaration, such as the definition of qualitative and quantitative objectives for the integration process¹¹.

In the course of ENETOSH's network activity, the needs which must urgently be met for promotion of the development of a risk-

prevention culture through education and training become apparent:

- Stepping up of research in the area of education: analysis of the needs of teaching staff in the area of occupational safety and health and of the needs of companies with regard to qualification in occupational safety and health, of their younger personnel in particular but also of their older employees; evaluation of the effectiveness of different educational approaches and methods for the development of a risk prevention culture
- Guidelines for the mainstreaming of occupational safety and health into the various areas of education and into corporate management at national level
- Instruments for the stimulation of joint activity between those responsible for the respective areas of occupational safety and health and education
- Systematic initial and further training of teaching staff at all levels of the education system in the principles of occupational safety and health and in transfer methods and integral strategies
- Greater and continuous representation of OSH projects in the European Union's Life Long Learning programme.

ENETOSH facilitates access to examples of good practice, and in conjunction with its members, has created a consensus on what teaching staff can and should know in order to communicate occupational health and safety in a sustainable manner. The next logical step would be the creation of a European centre which focuses the available resources on the subject of OSH education and training, systematically organizes the pooling of information between those responsible for the areas of OSH and education policy, and offers transnational initial and further training for experts in the areas concerned.

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1. Advisory Committee on Safety and Health at Work (2006). Education and Training. Opinion Doc. 2513/2/06. Adopted on 23.11.2006, pp. 6-7
 2. Report from the Education Council to the European Council: "The concrete future objectives of education and training systems", 14 February 2001, 5980/01 and "Detailed work programme on the follow-up of the objectives of education and training systems in Europe", Council of the European Union, 6365/02 EDUC 27, 20 February 2002
 3. European Commission, "Adapting to change in work and society: a new Community strategy on health and safety at work 2002-06", COM (2002) 118 final, pp. 9
 4. For documentation of the meetings of the Agency Contact Group, see: <http://osha.europa.eu/topics/osheducation>
 5. Cf. in this context the European Commission, "Improving quality and productivity at work: Community strategy 2007-2012 on health and safety at work", COM

- (2007) 62 final, pp. 13-14
6. For documentation of the papers presented at the 7th Training & Innovation, "Standardization of education and training in safety and health", see: <http://www.dguy.de/bgag/de/Veranstaltungen/tundi/index.html> and www.enetosh.net/webcom/show_article.php/veranst/train7. A publication containing the proceedings is currently in preparation.
 7. Ylikoski, Matti, Challenges of the changing world of work for the competencies in OSH, Factsheet No. 1; Swuste, Paul, A new model of accident prevention – how to manage the central event, Factsheet No. 2, see: www.enetosh.net.
 8. EQF (2008). Recommendation of the European Parliament and of the Council on the establishment of the European Qualification Framework for lifelong learning, PE-CONS 3662/07, Brussels on 29 January 2008
 9. For the ENETOSH Internet platform, visit: www.enetosh.net
 10. European Agency for Safety and Health at Work (2004), Mainstreaming occupational safety and health into education. Good practice in school and vocational education, ed. by Ulrike Bollmann, Luxembourg, p. 117 ff. http://osha.europa.eu/publications/reports/313/index.htm?set_language=en (DE, EN, ES, FR, IT, PL)
 11. <http://osha.europa.eu/topic/osheducation/rome.stm>

Jörn Janssen

Agency Workers: Social Justice Long Overdue

Institute of Employment Rights, London, 21st April 2008.

In the light of the battering of the British Labour Party in local elections on the 1st May, it seems most difficult to imagine any progress in labour rights. The British Government had already been lobbying against the draft European Directive for equal rights for agency workers. There is little chance now that this obstruction will cease just because the Prime Minister's power has been undermined again.

The dominant position of the British trade unions was put forward in a seminar of its legal think tank, the 'Institute of Employment Rights' in order to muster support for a new private members bill to be discussed in the House of Commons 7th May 2008. Andrew Miller/MP, however, presented his bill in a rather defensive way, as just another initiative to move the Government in the direction of equal rights for agency workers.

Fortunately Jack Dromey of Unite made a really convincing and unequivocal case that it is not just for the sake of migrant workers

that unions ought to press for equal rights. He made it clear, also, that all depends on the enforcement of the law, whether European or domestic.

A third contribution raised the ambiguous employment situation of agency workers in a triangular relationship, not knowing who they are employed by. Michael Wynn of Kingston University confronted the audience with a detailed presentation of case law showing the wide range of juridical interpretation, but hardly any strategy to consolidate employee rights on this front.

One may wonder whether this seminar raised morale or provided ammunition for fighting for equal rights of workers, or whether it was just imparting information about the divisions between workers employed under different conditions. Is this the inevitably defensive picture of a labour movement, whose representation has dwindled to a marginal minority in the labour party, let alone a powerful representation in Government?

Reviews

Rolf Gehring,
EFBWW

Johanna Beswick, Kirsten Roger, Edward Corbett, Sarah Binch & Kay Jackson:

An analysis of the prevalence and distribution of stress in the construction industry

Health and Safety Executive – Research Report 518, First published 2007

In 2005 the UK's Health and Safety Executive (HSE) commissioned research to gain a greater understanding of the level, causes and extent of work-related stress in the construction industry. The Health and Safety Laboratory carried out the survey. The study was conducted between November 2005 and January 2006 and results have been first published in 2007 under the title "An analysis of the prevalence and distribution of stress in the construction industry" (HSE Research Report 518). Assuming that stress is more prevalent with white collar workers, the survey focused on managerial staff and graduates. The survey included a literature review, a stakeholder consultation (25 in total, including HSE inspectors, trade union and professional and trade bodies, employers or worker representatives), a questionnaire (1,732 returned, a response rate of 35%) distributed to specific professions and post survey stakeholder-interviews. Based on the stakeholder consultation, the team chose the following jobs:

- Business/project manager
- Site manager
- Business manager/company directors (of SMEs)
- Designers
- Lane rental (i.e. highways/road workers)

Another three jobs were selected as a control group:

- General site operatives
- House building workers
- Demolition operatives (subsequently not included because of too low participation)

The main finding of the literature review was that there is little available literature, particularly scientific literature, relating to the issue of stress in the UK construction sector. Previous surveys have indicated that stress in construction is lower than in other sectors. However, there are limitations in these findings and most of the surveys are anyway older, and therefore not accounting for likely changes in the construction sector. Additionally, the findings are not congruent and differ for the various professions in the sector. More

recent reports also estimate that stress in the sector is on the increase. One survey, from the Chartered Institute of Building (CIOB) in 2006, reported: “that 68.2% of respondents within their sample had suffered from stress, anxiety or depression.” Some findings and data also exist on higher suicide rates for construction workers.

In the self-assessment of the sector by construction workers, stress is still not considered as an issue. In this respect the “macho-culture” is identified as a barrier. “Similarly, a study in Northern Ireland (1996) found stress to be as much of a problem for the construction industry as almost any other profession, but noted that individuals in the industry felt that admitting to stress was a major sign of weakness.”

The researchers considered that, from the literature available on this subject, it appears that, whilst levels of stress within the construction industry are relatively low compared to other industries, stress is still a concern for the industry. There has been little comparison made of stress levels and sources of stress for different jobs within the industry to date, so it is difficult to identify from the current research particular jobs that may be associated with higher levels of stress.

Who responded to the questionnaire?

- The most frequently reported types of work were highways/road maintenance; civil engineering; general construction work; contracting; office based work.
- 95% of the respondents had permanent contracts.
- 13% worked in small companies (< 50); 21% in medium sized (< 250) and 66% in large companies.

The average number of hours worked in the past 7 days was 47.6.

Findings

HSE’s definition of stress was included on the front page of the questionnaire. The extent of stress was measured by the following questions: “Within the past 12 month have you suffered from any illness, disability or other physical or mental problem that was caused by or made worse by your job or work done in the past?; How would you describe this illness [stress, depression or anxiety]? (*The SWI survey question*). An Additional question was also used. “In general, how do you find your job? [not at all stressful – extremely stressful]” (*The Bristol survey question*). Respondents had to indicate

on a five point "Likert" scale: Not at all stressful; mildly stressful; moderately stressful; very stressful; extremely stressful.

"The SWI question frames stress in the context of an ill health outcome. The Bristol question, presented after the list of job-related sources of stress, frames stress in a 'work-design' context. Including two methods of assessing stress in the questionnaire helps to cross-check and validate the findings. In addition, providing a definition of stress and specifying that the survey was interested in work-related stress may have helped to ensure participants were all 'talking about the same thing', therefore adding to the validity of the questionnaire."

401 respondents said they had experienced work-related ill-health within the past 12 months. The most commonly reported illnesses are bone, joint or muscle problems (141), stress, depression or anxiety (87) and headache and/or eyestrain (44). Approximately 5% of the respondents described their illness as stress-related, representing a greater prevalence of stress than estimated in other surveys to occur in the UK working population as a whole, including in the construction industry. This difference is likely to be due to the sample and methodological limitations discussed below. Remarkable is also the comparison with the Bristol-Question. Around 10% experience their jobs as "highly stressful" (people who found their job very or extremely stressful). The variation is maybe due to the difference in how the two items measure stress. The SWI questions frame stress in an 'ill health' context, and the Bristol question frames stress in a 'job demands' context. Compared with two other surveys, working with the same question and examining the working population as a whole, fewer people consider their job stressful: 9.9%, compared with 15.2% (HSE in 2005) and 18.5% (Bristol health and stress survey 2000; construction workers sample = 16.5%).

The following jobs are most affected, as indicated by the percentage of those who feel very or extremely stressed:

Director/Partner	25.9%
Site manager	18.3%
Project manager	16.5%
Road maintenance labourer	12.1%
Other management functions	10.3%

In considering those who are most stressed the report concluded:

“Management grade employees, along with road maintenance staff, designers and administration staff report more stress than other job roles, primarily construction labourers/operatives within the present sample.” The results confirm, to a large extent, what was found during the initial stakeholder consultation. Stakeholders felt that management grades experience more stress than the more manual job roles. The exception to this is the appearance of the road maintenance labourers in the “most stressed” list. Interestingly, the other control groups (house building and general construction operatives/labourers) did not appear on the most stressed list.

The data also suggest that females are more likely to report stress than males. This may be because females are more likely to report work-related stress in general, or due to other pressures or demands that are unique to females working in a male-dominated industry. Alternatively, it may reflect the nature of the work undertaken by the women in the sample.

The main work-related sources of stress

In general, researchers found earlier findings confirmed by their survey. A large stressor for many members of the construction industry is having too much to do in the time available. In addition, for some management grades, being responsible for the safety of others was found to be particularly stressful. Road maintenance operatives/labourers found the dangerous nature of their job to be stressful. The top two sources were the same for all sizes of company, namely:

- I have too much work to do in the time available
- I travel or commute.

Analysing the answers concerning sources of stress from those respondents who reported being stressed, researchers found “significant associations for those who agreed with the statements on sources of stress and those who reported stress. The exception to this was for the statements:

- I work weekends and nights
 - I travel or commute
 - I am responsible for the safety of others at work
- My job is dangerous

“It is interesting that, particularly the last three, do not have significant associations, despite being reported as significant

stressors for the construction industry respondents in this sample. It is not clear why this might be the case.”

Certain biases: One aspect, discussed by the authors, is that those who are most or those who are very little stressed have maybe not answered the questionnaire.

Company size: The area where the survey was conducted is perhaps the least representative is in terms of company size. 3.8% of the sample worked in micro organizations (0-9 employees); however, other data suggest around 90% of the companies within the construction industry are micro-organizations. Stakeholders tend to estimate that the weak representation of small (micro) firms, that are considered as more stress-affected, results in an underestimate of the level of stress.

Employment contract: The vast majority of the sample had permanent contracts. This is another area in which the survey does not accurately reflect the construction industry as a whole; many construction industry workers do not have permanent contracts.

Ill health: The prevalence of ill health in the construction industry found in the study was higher than reported by other studies. This is likely to be due to differences in sampling methods. Respondents already knew that they are expressively being asked about stress, and therefore may have been more likely to report it.

Working hours: an underestimation of working hours is also likely because of the season (winter time) and because of not including travelling time.

Discussion of the Results

“Most interviewees (Post-survey stakeholder interviews) were not surprised to see site managers high on the list of ‘most stressed’ job roles. Reasons which are mentioned by the interviewees are:

- Site managers being the central point for most projects and therefore under a lot on pressure,
- The job of site manager being so critical. In addition, if there is an accident, HSE will investigate through this person, and Site managers tending to be the first on the site and the last to leave at night, so some of their stress may arise from working long hours.” (43)

Regarding our own discussions in EFBWW and in relation to the CLR-Study on stress, it is interesting to compare these statements with statements given with regard to the stress of road

maintenance workers. "Stakeholders suggested a number of reasons as to why road maintenance labourers may report relatively high stress levels.

- The danger of drivers on the roads.
- High pressure to finish the job from the organisation running the contract, which is passed down from management to the operatives.
- Have too much to do in the time available, reflected their experience of this industry.

The unsocial hours some road maintenance operatives work can lead to work-life balance problems, which can be stressful. This group of workers sometimes have to live in caravans, which can lead to a poor diet and associated ill health."

In its recommendations, the researchers especially focus on the need for further research. With reference to some weaknesses in their own study, they suggest more in-depth analysis of the SME sector as well as further research on other professions in the construction industry. The present study was focussed on the prevalence and distribution of stress in the construction sector, but not on potential solutions. "Therefore, consider further research to explore and consult the industry about potential and realistic solutions to the problem of stress in the industry." However, the report concludes with some proposals for interventions suggested by the stakeholders.

In my opinion, the report is quite useful since it focuses on some professions and their respective work situation which have, up to now, not been the focus of trade union discussions about stress. Becoming aware of the specific work situation of white collar workers is, on the one hand, of some importance for trade unions if they wish to improve their influence among these employees. On the other hand, it is also vital for a comprehensive view of the whole construction process and, therefore, vital for improving the work situation of blue collar workers as well.

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The Construction Chart Book: The U.S. Construction Industry and its Workers *[4th Edition, 2008], \$15.*

Free Online version available at this URL in April. [http://
www.cpwr.com/rp-chartbook.html](http://www.cpwr.com/rp-chartbook.html)

The Construction Chartbook contains information on all facets of the U.S. construction industry: economics, demographics, employment/income, education/training, and safety and health issues in a series of 50 topics with a description of the subject matter and corresponding charts and graphs. This succinct and extensive overview of the construction industry, with a unique presentation, is the only resource of its kind in existence. Owners, contractors, unions, workers, and other organizations, as well as researchers, economists, trainers, safety and health professionals, and industry observers will find relevant information inside.

This fourth edition features topics and information not covered in previous editions, such as the total cost of injuries and illnesses to the construction industry, the use of health care services among construction workers, expanded reporting of blood lead levels in construction workers, chronic illnesses and health risks, respiratory disease, immigrant workers, day laborers, and much more. Hispanic workers in the U.S. construction industry are prominently featured so readers can find information comparing fatalities, injuries, and other issues concerning the fastest growing minority group in the United States.

An expanded index and glossary, plus a full reference listing and an informative section on "Limitations and Observations on the Data" are helpful to researchers. Vocational education instructors and aspiring workers in construction will appreciate a two-page listing of apprenticeship training specifics for the construction trades.

Published by CPWR The Center for Construction Research and Training through a grant from the National Institute for occupational Safety and Health (NIOSH), the authors of The Construction Chart Book hope to elicit discussion, further research, and spur action on the issues raised.

European Trade Union Institute for Research, Education and Health and Safety (ETUI-REHS):

Benchmarking Working Europe 2008,

Brussels 2008, 110 pages, Euro 20. ISBN: 978 – 2 – 87452 – 121 – 8 (printed), ISBN: 978 – 2 – 87452 – 124 – 9 (online), website:

www.etui-rehs.org

Otto Jacobi,
Laboratorium
Europa,
May 2008

A Useful Tool

The EU Spring Summit is a regular opportunity to hold a meeting between the political leaders of the Community and the leaderships of both the European trade union and employer umbrella associations. This event, also called Social Summit, is the background for the edition of a report on recent social developments in Europe by the ETUI-REHS, the research arm of the European Trade Union Confederation. This report, „Benchmarking Working Europe 2008“, is the contribution of the ETUI to the Summit. It contains eight chapters on the following items:

- Quality of Jobs
- Macroeconomic developments
- Employment
- Europe’s Youth
- Wage development
- Social protection
- Worker’s involvement
- European Social Dialogue

It provides a wealth of useful information not only for trade union practitioners but also for students and academics, who wish to become experts or renew their knowledge on European social affairs. The advantage of the 2008 Benchmarking report is that each chapter is focussed on carefully selected graphs supplemented by explanations, easily readable comments, and short descriptions of the trade union positions.

The chapter on „Quality of jobs“ puts particular emphasis on the ETUC’s view that high quality products and services, regarded as prerequisites for long-lasting European competitiveness in the global context, can be delivered only by highly qualified workers. This however requires an efficient system of schools and universities as well as vocational education and further training. According to the ETUC, the aim should be to develop Europe into a major science

centre of the world.

Two events of the macroeconomic development are of particular interest: First, the fact that economic growth in the wake of the catching-up process in the central and eastern European member states of the EU is substantially faster than in the West; secondly, the financial crisis in the U.S. entailed worldwide turbulences. The origin of the financial crisis as well as its global repercussions is well explained.

The chapter on wages illustrates that the pay hikes in the new member states are in line with the economic growth resulting in a slow but permanent narrowing of the enormous wage gap between East and West. The chapters "Social Dialogue" and "Worker's Involvement" present an overview on the relations between the ETUC and the employers as well as on the participation rights of the workforce in multinationals.

"Benchmarking Working Europe 2008" is a useful tool for different groups of readers since it is brief, precise, and rich with information.

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