Safety management at the frontier: Cooperation with contractors in oil and gas companies

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1. Introduction

In the early 1980s Alain Wisner coined—along with his team of the Conservatoire National des Arts et Métiers in France—the concept of anthropotechnological islands to refer to the way to manage safety in the branches of multinational companies located in developing countries (Wisner, 1984, 1985). According to this author, the method consisted of isolating industrial plants from the technology transfer was inspired by the call for papers for a special issue published in June 2012 by the journal Laboral (http://laboreal.up.pt/) about the state of the art in anthropotechnology, as a tribute to Alain Wisner. A first draft of this paper was presented at a conference to which we were invited by the Association Internationale des Sociologues de Langue Française (AISLF) during its 19th Congress, held in the city of Rabbat, Morocco, in July that same year.

The creation of anthropotechnological islands is only indispensable in the case of the great discovery of the Philips Company (and other Companies) is that to obtain the same products, it is not enough to have the same machines. It is also necessary to have people in the same physical and mental state, and organized in the same way.

This analysis about the role of large multinational and local corporations in the technology transfer was inspired by the call for papers for a special issue published in June 2012 by the journal Laboral (http://laboreal.up.pt/) about the state of the art in anthropotechnology, as a tribute to Alain Wisner. A first draft of this paper was presented at a conference to which we were invited by the Association Internationale des Sociologues de Langue Française (AISLF) during its 19th Congress, held in the city of Rabbat, Morocco, in July that same year.

The creation of anthropotechnological islands is only indispensable in the case of advanced technology. For instance, the Unilever factory in Bombay is managed, from the point of view of safety and hygiene, in a remarkable way, with a very low labor accident rate. The same goes for the Volkswagen factory in Sao Paulo. In Minas Gerais, Brazil, I had the opportunity to visit the steel mill of Joao Monlevade (Pont-à-Mousson). There, again, we couldn’t find any of the terrible difficulties experienced by Brazilian workers: good housing, a health center, schools, all financed by the company, and the impression of being constantly on company grounds. In other words, the character and the degree of ‘the isolate’ are the result of a decision, of a policy implemented by large corporations. In fact, such islands shouldn’t surprise us; they correspond to what was created in France at the end of the reign of Louis XVI for the Salines d’Arc-et-Senans and in the 19th century for iron and steel works, coal and railways. At Noisiel, in the Parisian suburbs, it is possible to visit the village-isolate around the Menier chocolate factory’ (Wisner, 1985).

International reviews show the deepening of outsourcing (shifting from secondary to core processes) and, despite the legal hurdles implemented in developed and developing countries to control abuses, its strong connection to incremented job precarity and to the tendency to delegate the riskiest activities to sub-contractors. Through a mixed quanti-qualitative design, but essentially based in qualitative evidence, this paper compares the changes in the relationships with contractors that took place in 2012 in two oil and gas Patagonian subsidiaries when safety management systems were implemented. The comparison of these case studies highlights emerging hybrid forms of subcontracting conducive to more constructive and even cooperative ties between contracting and sub-contracted parties.

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buffet) and later of core activities, with a direct impact on safety, like the daily maintenance of high-risk installations, jointly contributing to the development of subcontracting networks. Did the up-to-date technology transfer that characterized the anthropotechnological islands extend in the new scenario to local contractors?

Unfortunately, it didn’t. At least, that’s the result shown by the literature about subcontracting processes worldwide. The priority in these processes was the reduction of costs. As a result, instead of the transference of risk management technologies, what took place was the transference of riskier activities to contractors. That happened to such a point that once the negative impacts on safety and health of the workers became evident governments – first in developed and then in developing countries – were forced to take action through legislation and government enforcement bodies. Simultaneously, advances were made in the self-regulation of sectors and companies that performed high risk activities, reflected during the last decade in a peak in certification of safety management systems in the branches of local and multinational companies. Did this last fact encourage the spreading of new safety management technologies to the contracted SMEs?

This article presents the result of research performed in 2012, through which we investigated the functioning of the recently certified safety management systems by means of perception surveys involving the staff of the contractors in the branches of two oil and gas Patagonian subsidiaries: one of a local, state owned company and one of a multinational company.

Regarding similarities between the two cases, the first and more evident one resides in the implementation and certification of a safety management system and the interest in reducing the gap between practices and norms showed by the results of our perception study. The second one is related to the resort to hybrid coordination forms with the contractors. The characteristics, reasons, consequences and future perspectives of such hybrid forms raised some questions: were these forms coherent and stable or were they conflictive and transitional? In other words, were we witnessing an innovative form of coordination between the company and its contractors, or a variant of the more traditional mechanisms of coordination between both?

We found that, in addition to specific features which are described for each particular case, there are emerging hybrid forms of firm coordination that are being overlooked by current scholarship. In the first case, the hybrid nature of the job is a response to the bureaucratic, vertically-integrated and closed organizational structure of the firm, and its difficulties to adapt to the requirements of a new generation of Safety Management Systems. In the second case, the hybrid form of “organic contractors” reflects instead a fundamental change in the relation with contractors within an organization which depends on local contractors for its safety operations.

1.1. Methodology & materials

We will keep the companies anonymous by using fantasy names. GEAR in the case of the branch of the multinational company and GENECH in the case of the branch of the national, state-owned company. Both were located in countries in the southern cone of Latin America and specialized in oil & gas extraction. The survey from where we extracted the data for this paper was conducted after the implementation of a Safety Management System (SMS) according to international standards (OSHAS 18001) in the case of GENECH and according to company headquarters standards in the case of GEAR. Both surveys were conducted by request of both organizations.

The diagnostic was carried out in two consecutive phases, based respectively in qualitative and quantitative techniques. In the initial phase, a questionnaire with 100 questions was answered by 90% of the workers of GEAR and GENECH, including contracted workers (permanent and temporary), and the workers of the contractors that were working for both companies at the time. The management in both companies (directors, managers and supervisors) responded the survey in 100% of the cases. At the GEAR branch 1836 people responded while 1270 did so in GENECH.

The questions were grouped for their analysis according to a set of parameters referring to individual and group behavior, the organization of work and board and management practices. After the statistical analysis, the interpretation of the results was discussed in individual and group interviews (focus groups) carried out in the workplace (corporate offices and oil and gas camps) with the participation of staff from different hierarchical levels, sectors, specializations, seniority, and contract types. The aim of the meetings was to collect contextualized interpretations and explanations for the quantitative results and additional information and proposals for the solution of identified problems. At GENECH we recorded the discussions held in 16 focus groups organized in 3 different locations, with a total of 72 interviewees. At GEAR we called 37 focus groups in 5 different locations, with 143 interviewees. The present paper will work on the qualitative data through a systematic treatment of the testimonies recorded in the interviews. As opposed to the majority of case studies in the literature, which is generally focused on the analysis of incidents or accidents, this research presents and compares two case studies that highlight practical lessons learned from positive, proactive problem solving experiences. As will be further developed in the sections below, attention to proactive cases can help develop benchmarks useful for strategic decision making within (and beyond) specific organizations.

The survey was not conducted by sampling. All the employees present in the companies at the time of conducting the survey responded the questionnaire – regardless if they were company or subcontractor employees, so that it could accomplish the double role of instrument for an employee collective involvement and diagnose study. At the multinational company, the employees hired by contractors stood for 71% of the responding employees. At the national company, that percentage was 53%. These proportions are common to oil and gas companies, which constantly undertake site works for which they resort to subcontracting.

4 With the goal of investigate about “The shared perceptions of organizational members about their work environment and, more precisely, about their organizational safety policies” (Cabrera et al., 1997; cit. by Guldenmund, 2000: 219).

5 The design of the survey was done with the collaboration of Marcel Simard in the framework of a cooperation agreement between the Centro de Investigaciones por una Cultura de Seguridad at the Universidad de San Andrés in Argentina (http://www.udesa.edu.ar/Unidades-Academicas/Centros/Investigaciones-por-una-Cultura-de-Seguridad/El-centro) and the Institut pour une Culture de Sécurité in Toulouse, France (http://www.icsi-eu.org/fr/).

6 The methodological strategy of the research, which is based in the survey of every person (not only permanent staff) performing duties, allowed measuring the reach of outsourcing, identifying different forms of interrelation and, more importantly, involving the staff working for contractors in a reflection about the survey’s results in the qualitative phase of the investigation. It was the richness of the testimonies in this phase combined with the virtual lack of research integrating contractors, qualitative and quantitative methods, in the diagnose process, that motivated this article.

7 The collection of testimonies was done by dactylographic notes during the meetings. For its analysis, we assessed the possibility to resort to software specialized in the analysis of quantitative data, but we opted for manual index cards and post-codification. The volume and the nature of the material collected didn’t justify adopting a software.
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