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THE PRINCE'S EYE-GLASSES

According to the philosopher Heidegger, what we see worst is the pair of spectacles which, in front of our eyes, we see through. This saying is still pertinent. The prince, as a metaphor of those who hold power, has turned his eyes toward other objects: the overriding concern is no longer the imbalance of trade but unemployment. But does he freely choose his pair of glasses? Lenses have changed, but the powers-that-be still too often eschew contact with reality.

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OVERLOOKED

During the French parliamentary elections in 1978, a television debate, based on apparently opposite conceptions of leadership, took place between Raymond Barre, the prime minister, and François Mitterrand, the leader of the principal opposition party. The press analyzed this tense debate by referring to a match or even a skirmish between warring forces. Nearly everything said during it could be reduced to four statistical values: rising prices, the balance of trade, industrial production and the number of unemployed persons. Each speaker claimed he could improve these values more than his opponent; but both seemed to agree that these statistics adequately described the state of the nation. By adding to these four statistics politicians' popularity ratings, which have been regularly published in recent years, we obtain a nearly exhaustive description of what, by analogy with driving a vehicle, is called a dashboard by senior executives in corporations. The warnings, satisfactions, judgements and choices of government officials very much depend on the values of these indicators, measured as regularly as possible.

One day, a friend of mine, a young administrator at the French National Institute of Statistics and Economic Studies (INSEE), pointed out that extrapolating a statistic indirectly related to inflation over a year from its last known value yielded a figure higher than the one announced by the government. This finding had very little worth since any statistical phenomenon normally undergoes fluctuations with local maxima. After writing a short, informal note about this, he was, nonetheless, rewarded by a call from a senior government official who demanded that this subversive text be withdrawn from circulation!

The infinity of events that, at each instant, enters into the operation of the country's economy is thus reduced to a few figures, which everyone looks at and talks about. It is, therefore, important to ask what statistics reveal and hide, what they twist out of shape and how – to study the reactions to statistics and, if these reactions turn out to be unfortunate, to see whether we can propose other indicators.

Most of these tasks have been left unaccomplished. Economists, whether academics, journalists or advisors to the powers-that-be, apparently cast doubt on a statistic only when they deem it advantageous to question a numerical value that contravenes their arguments. Even in this case, they do so with moderation, as though only certain criticisms could be aired in public. The chief French labor union (CGT) does calculate a price index different from INSEE's; but no rival calculations have been made of official statistics about manufacturing output or foreign trade. Regardless of how much the prince's eyeglasses deform or filter reality, everyone seems intent on wearing the same pair.

The author of this article is not a specialist in macro-economics or statistics. His field of research is corporate management. The following thoughts spring from applying the managerial tools with which he is

familiar to the study of government. The findings of research on management are so far from what commonsense suggests that it is worthwhile to examine whether something similar might be happening in the running of the state.

IN A HURRY AND UNDER THE TYRANNY OF NUMBERS

Let us start by observing that top managers, whether a corporate executive at General Motors or the owner of a grocery store, never have enough time to do everything they should do. Customers, suppliers, colleagues, bankers, public administrations, products… all cry out for attention. Managers make most decisions in a hurry. The owner of a small company envies senior executives in big corporations who have specialized staffs for preparing reports. In turn, the latter envy small businessmen who, they imagine, can keep an eye on everything. In both cases, "bosses" are doomed to basing their judgements only on those pieces of information that they have the time to perceive and understand. The bottleneck in decision-making is not at the level of collecting and processing data, despite what computer salesmen say, but at the level of what the head of a firm understands, whether he has a vast computerized system or only a small notebook where he scribbles down

According to the philosopher Heidegger, what we see worst is the pair of spectacles which, in front of our eyes, we see through. (Anton Kertesz: *Mondriaan's glasses and pipe*, 1926)

observations. In all cases, the same scenario: at any given moment, a top manager takes into account but two, three or maybe five statistics at most. Of course, his experience, informed by the past values of the statistics being used, has gradually led him to form an idea about the scope of his activities and reflexes. However he must always place himself in the current setting, and an old reflex might turn out to be ill-timed.

In comparison with all other types of information, the advantage of numbers is that they are concise,

appear to be objective and lend themselves to incomparable visual presentations. Borrowing the language of poets, Saint-Exupéry had the Little Prince say,

"If you tell grownups, 'I saw a pretty red brick house with geraniums in the windows and doves on the roof…', they are unable to imagine the house. You have to say, 'I saw a house that cost a hundred thousand francs.' They then exclaim, 'Oh! It's pretty!'"

The statistics used by top executives have a tyrannic impact on their judgement, as can be seen when this tyranny leads to absurd decisions – an absurdity revealed by the decision's impact on other numerical parameters, as studies in management (BERRY *et al.* 1979) have shown. Let us cite but three cases. First of all, owing to their obsession with monthly tonnage figures, metal-working shops executed the heaviest orders toward the end the month without paying attention to whether or not the order was urgent (HATCHUEL & MOLET 1983). Secondly, given their preoccupation with maintaining a constant daily output, operators mined the least profitable coal first, an act precipitating a shutdown since the most profitable veins were not worked (RIVELINE 1973:50). Thirdly, on account of the method used to calculate the cost of biochemical analyses, the most sophisticated equipment was assigned to the best equipped hospital laboratories (MOISDON & TONNEAU 1983).

Repeated findings of this sort in hundreds of studies have led researchers in ma-nagement to postulate that everyone behaves rationally using the indicators that he feels are used to judge him, but that there is no *a priori* coherence among all these "local rationales". We would be mistaken to imagine that every organization has somewhere at its top someone who sees to it that this coherence exists. This would lead us to overlook the fact that even this guardian of coherence bases his judgement and decisions on from three to, at most, five statistics, some of them possibly quite different from the ones used by colleagues.

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If we apply these remarks to the operation of a government, we can imagine that, during cabinet meetings, viewpoints clash since each minister is the guardian of a few statistics that serve to judge his own management. In fact, each of the four statistics mentioned earlier can be attributed to a ministry: the price index to Finances, the balance of trade to International Trade, manufacturing statistics to Industry and the unemployment rate to Welfare. However the policies to be adopted in favor of these four viewpoints are different, even contradictory. Increasing manufacturing output often requires immediately importing more capital goods, which are not always offset by a subsequent increase in exports. Fighting against joblessness by creating unproductive jobs pushes price upwards. Improving the balance of trade by increasing productivity so as to lower costs or by reducing economic growth so as to curb imports increases joblessness. And so forth. The head of state, or of government, has to arbitrate day after day and, when doing this, focuses on the aspects he deems the most important politically.

This is normal – even, we might think, the way institutions should operate. Before adopting this serene conclusion, we should inquire into the quality of the four statistics available to ministers. In firms, the calculation of a cost price might be so conventional that its variations have little relation with its assumed economic effects. In the case of tonnages, delivery dates or cash flows however, errors take place within limits and are soon detected. On the contrary, an error in economic aggregates at the national level might, as we are going to see, result in figures of sizeable proportions without any possibility for rectifying them… or even being aware of the error.

THE PRINCE'S FUZZY STATISTICS

Let us examine each of the four statistics used by the government.

The price index

Measuring the price index, as we know, raises thorny – theoretical and practical – questions. Not all prices vary in the same way: some fall while others rise. This difficulty can probably be handled by using an average. However new products come out, and the prices of older products change without any certainty about when a modification is significant enough so that comparing prices over time has lost meaning – unless we define a precise list of products (supposed - ly) corresponding to consumers' needs. A rise in the index by 10% should signal that consumers need 10% more cash if they are to feel that their consumption has not changed.

For these reasons, statisticians draw up lists of products adapted to various categories of consumers. Best-known is the list of 295 items used to calculate the retail price index. It is drawn up on the basis of an average established between the consumption habits of quite different households. Frankly, it represents noone's consumption (LÉVY *et al.* 1995:121)! For example, "public transit" corresponds neither to the more-than-average use of public transportation by suburbanites in big urban areas nor to the underconsumption of this item by people who dwell in small towns. The item "rent" represents about half what is actually paid, because calculating it takes into account all persons who do not pay rent, in particular homeowners. Nor does the price index accurately reflect consumers' intuitive feelings about their purchasing power, since it includes neither income taxes nor social security payroll taxes. In fact, the latter are considered to be a levy on income instead of an act of consumption. Not to mention insurance annuities, an expenditure that cannot be broken down into a "volume" and a "price".

Given all the conventions and exclusions affecting the calculation of a price index, we are not surprised when a national labor union computes a different one, per-

Top executives are forced to base their judgements only on those pieces of information that they have the time to perceive and understand. (J.H. Lartigue: *Richard Afedon,* **New York, 1966)**

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haps as scientifically sound. What is surprising, on the contrary, is that several other indexes have not been made, eventually with quite different numerical values. However the index published by INSEE is significant. It serves as the peg for wage hikes. The government makes commitments about its future value and proffers explanations when the figure observed ex *post facto* is higher than predicted. As we know, officials pay close attention to the price trends of products on the index, even though, in principle, this list is drawn up independently by INSEE and not disclosed to the executive branch.

The balance of foreign trade

The balance of trade, a topic already treated by an article in this journal (HOC-QUARD 1985), is the quaintest of the four. The balance of exports and imports is measured in two different ways: by the Customs Office and by banks. Customs, not without error, records the quantity and price of all merchandise that crosses the borders, whereas banks, the indispensable go-between for moving funds between France and foreign lands, publish statistics that the Bank of France periodically centralizes. Comparing these two sources brings to light major discrepancies that cannot be set down to errors in reporting.

One reason for these differences is known as leads and lags. Customs coverts all product prices cited in foreign currencies to francs at the last known rate, usually from the evening before. Actual payments, which figure in the banks' records, take place approximately three months later. In the meantime, currencies have fluctuated, but there is no way

to correct Customs' statistics ex post facto. Despite methods for correcting (as best possible and in general) the distortion due to leads and lags, the difference between the circulation of merchandise and the corresponding payments amounted to +21 billion francs in 1980. In 1981, it amounted to -21 billion, a decrease of 42 billion (21+21) in a year's time, while the balance of current transactions was -41 billion. The uncertainty surrounding this figure reflects the magnitude of what is being measured!

The balance of trade by industry can be calculated only by using the classification made by Customs. The latter contains enormous classes (for example, the automobile industry) but also breaks important groupings up into smaller classes (such as the "parapetro-leum" sector). Furniture, depending on whether it is made of wood, metal or plastic, figures under different headings along with products other than furniture (1). For a long time, software, of which France has turned out to be a leading exporter, went unrecognized because Customs classified it as "used magnetic tapes", which were taxed less than unused tapes.

These observations directly mold the government's ideas about foreign trade. Selling a nuclear power plant is gratifying, since the sale can be measured right away. Month after month, officials anxiously await

A not very sure statistic is used to measure the health of manufacturing.

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results from the automobile industry, whereas the range of products derived from petroleum deters drawing any general conclusion, and nearly nothing is said about

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(1) *L'État et le commerce extérieur*, p.40

many other products, such as furniture. As for software, which has turned out to be a substantial source of foreign currency earnings, the National Five-Year Plan did not even mention it.

Manufacturing

We might assume that more would be known about the output of industry. However it should be pointed out from the start that manufacturers are not inclined to communicate their statistics to the administration,

too familiar criticisms. This statistic increases with output of any kind – whether weapons, gas burned up in traffic jams or drugs that do not necessarily improve well-being. Clever arguments have taken shape around the idea of the utility of production (FOURQUET 1980: 347), but there are no criteria for quantifying this utility.

We are tempted to say that an increase in production, whether useful or not, is always good for jobs. Let us temper this opinion however. Contrary to what is generally thought, manufacturing, owing to rapid

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Even if this statistic were accurate, its portrayal of the economy is the target of well-known criticisms

despite INSEE's provisions for confidentiality. It took a long time with many a storm since WW II, for manufacturers, INSEE and the Ministry of Industry to reach the current modus vivendi (VOLLE 1982).

For technical reasons, this working arrangement is far from satisfactory. First of all, many production figures are reported not monthly but quarterly at best. Nonetheless, a monthly index is calculated, and then variously corrected to make its fluctuations meaningful. It is an index of the "volume" that, for each product, results from dividing the value of output by a price index – whence formidable problems: what is the volume of radar or mainframe computers?

A not very sure statistic is thus going to be used to measure manufacturing's health. Even if it were accurate, its portrayal of the economy is the target of all

productivity increases, plays a limited role in creating jobs. In 1983, it employed only 32,3 % of the labor force in France (INSEE 1984: 100). Its ability to create jobs cannot be compared with that of commerce and the service sector. Since 1993 in the United States, high-tech industries created 217 000 new jobs whereas traditional manufacturing lost 565 000. Over the last ten years, the number of secretaries has increased by nearly a million; and that of cashiers, by half a million (Saint-Gobain 1984). We shall come back to this question of job creations.

For the time being, note that an index of manufacturing output can be produced but that problems of classification arise similar to those encountered in calculating the balance of trade. For example, the "textile industry" taken as a whole underwent, from

1963 to 1973, a period of stagnation followed by moderate growth. If we distinguish between three subcategories however, we notice that hosiery's experience resembled that of the industry as a whole whereas "artificial and synthetic textiles" grew tremendously, and "natural textiles" dropped into a lasting recession. Clearly, the prince will react differently depending on which of these three pieces of information he is given. Classifying economic activities under headings is an ongoing political issue, one that is all the more complicated insofar as the contents of headings often differ country to country (VOLLE 1980: 43).

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The number of jobless

Unlike the previously mentioned statistics, rival estimates of unemployment abound. Since all this has been amply covered in the press, we are spared dwelling on this topic. Suffice it to say that the very definition of "unemployed" is riddled with problems. If we separate the persons holding paid employment from the others, the latter category will contain children, students, retirees and homemakers along with the jobless. When a homemaker decides to earn a living, she is counted, actually or potentially, among the unemployed. Although early retirement programs frequently serve to avoid dismissals, it should not be taken for granted that a 55-year-old

"preretiree" is in a better situation than a 22-year-old who has lost his job. Beyond any question, many 55-year-olds are experienced, useful or even indispensable. Finally, there is also a group of more or less "clandestine" workers or volunteers, for whom the borderline between work and a past-time is not clear.

Release fuzzy figures

Oscar Morgenstern, an American economist, has suggested that economic statistics should be published along with indications of their degree of reliability (MORGENSTERN 1971). After all, a number is not published in physics without a description of the measuring procedure; and the margin of error is often indicated. In economics, nothing of the sort! Morgenstern has ironized about deviations of 5% from statistics that have a margin of error of 30% owing to the difficulties of definition or measurement. However, as he has pointed out, no government has imagined releasing statistics with their probability ranges. For the sake of economics, he has lamented this situation, attributing it to politicians' need to express opinions in peremptory terms.

This explanation seems too simple to me. Politicians are subject to voter expectations, and we doubt that public opinion would accept statistics that keep it from deciding whether a policy will work or fail. On the contrary, the public would conclude that the truth was being hidden from it; and there would be no lack of pundits abounding in that sense. Divergent statistics are sometimes released about, for example, the size of a demonstration: "The unions estimated participation in the march at 200 000; the Home Office, at 30 000." However it is hard to imagine such fuzzy declarations about foreign trade or manufacturing.

The demand for accurate statistics arises out of ordinary mortals' intuitions (necessarily based on personal experiences) about economics. Everyone knows how hard it is to estimate the size of a crowd, but we are all sure of our feelings about whether our purchasing power is rising or falling. Everyone knows what sales figures and earnings mean in a small company, and we are all conscious of, or able to intuit, the situation of the jobless. Though lacking an advanced education in economics and statistics, we are naturally inclined to believe that concepts from these disci-

plines can easily be transposed to a nation-state and measured.

Let us draw a parallel with the legal sphere. Civil courts continually have to make awards under uncertain conditions – for example, apportioning goods that have no market value, compensating the damage done to a business's image or a person's reputation, or indemnifying a physical or moral precium doloris. A magistrate who shirks his duty by claiming that the situation is fuzzy would commit a miscarriage that exposes him to legal proceedings. To keep the peace, truth and falsehood, right and wrong, must be sorted out even if this sorting is largely a matter of convention, or is arbitrary.

These remarks lead to the idea of taking issue with the statistics chosen for an executive dashboard and of eventually replacing them with more relevant indicators. Studies of corporate management usually draw this conclusion. It is worthwhile reexamining whether this idea can be transposed from the corporate realm to governmental circles.

FOUR FORCES OF RESISTANCE

When a decision-maker is pushed by a specific parameter toward a choice that can be criticized, he comes up with the idea of eliminating the trouble-making parameter. This happened in the three cases cited at the start of this article. The metal-working plant and the mine were both subject to the dictate of tonnages; and the laboratory, to requirements about the cost price of B, a key used to set the tariffs of biochemical tests and calculate the proportion covered by Social Security. In each of these cases, researchers and their contacts inside the organizations under study realized that four forces of resistance – always present but of variable intensity – kept statistics in place: resistance from materials, from persons, from institutions and from norms. Since reality, it is said, is what puts up resistance, we assume that these statistics draw their substance from these forces.

• The *resistance from materials* was obvious in the example of the mine. Nothing was easier to measure than daily output, by simply counting the number of mining-car loads extracted. Hiding an automatically measured figure would have been senseless, since we can hardly think that someone can manage better by knowing less.

• The *resistance from persons* changes when the people involved are replaced. This resistance is not so evident in the examples cited. It is more visible when the institution is small, a family company for example. However, in big organizations too, we are familiar with fixed ideas that, held by senior executives, do not survive the latter's departure. A famous example was the ageing Henry Ford nearly ruining his company because of his immoderate sense of power and secrecy (DRUCKER 1957).

•The *resistance from institutions* stands out in the case of the laboratory. Quantifying tests was a response to requirements from the hospital and Social Security. Hospital expenditures were calculated in relation to a per diem defined for all services in medicine or surgery. Since this per diem included biochemical tests, laboratory expenditures had to be spread over various services. The general method for doing this was to calculate the service or product as a whole number multiple of an elementary unit of production, in this case B. It followed that the cost of B could be used to evaluate laboratory operations. This boosted the tendency toward overequipment and an overconsumption of lab tests: the more B units produced, the faster they are produced, the more the cost of B diminishes. Unlike tonnage in the mine or metal-working shop, output is hard to measure for a hospital laboratory. How many B units should be assigned to a lab test triggered prickly discussions. Social Security required an answer in order to calculate its coverage of tests run in private laboratories.

The *resistance from norms* is related to what is universally taken for granted, even if the latter has lost its validity, as illustrated by the case of the mine. Measuring daily output led to extracting the coal that was easier to get but of poorer quality. This was absurd given the menace of a shutdown owing to the mine's deficits. However it was a rational decision when no such menace existed and coal production was a national priority — equipment was used to full capacity, and a maximum of what could be mined was extracted.

These four forces of resistance are felt when a new instrument or measurement is to be introduced. The materials, persons, institutions and norms in place must go along with the change. The failure of many an attempt to set up managerial dashboards or controls can be interpreted as the victory of one of these forces, despite support from the other three.

Transposing these remarks to the statistics used by the prince presents no particular difficulty except for the resistance from persons, even though historians attribute a decisive role in affairs of state to men such as Philip the Fair, Colbert or Napoleon. François FOURQUET (1980) tells how certain strong personalities in France undertook, after WW II, to build a national accountancy system that would play a key role in steering the nation's economy, like ordinary accountancy in firms. Their work has deeply affected economics, but it is doubtful whether any government has ever put it to much use (p.353). On the other hand, the other three forces of resistance have played an obvious role in maintaining the four statistics under examination.

The price index and resistance from institutions

Though hard to measure, price indexes are an overriding institutional requirement not only for calculating wage hikes but also for applying contracts with clauses about indexation. Their use is an inevitable antidote for inflationary phenomena. Their publication sets off wide-ranging reactions among players in the economy, including national and international financiers. Since every serious country releases a price index, we cannot imagine not doing so.

The balance of trade and Customs

Statistics on the balance of trade have an impact on institutions when they are released, but are maintained in place owing to resistance from materials (like a mine's daily output). Nothing seems easier than to add up figures from Customs. Nonetheless, no such calculations are made for transactions between regions or departments inside France. We might wonder whether transactions between the Provence-Côte-d'Azur and Rhone-Alps regions are balanced, in the same way we inquire into the exchanges between France and Germany. That would have been possible under the monarchy, when countless tolls were collected at gates on transportation routes. The estimates we have nowadays are fuzzy, based on the transfer of funds between banks – an ignorance with possibly fortunate effects for national unity.

Industrial output, a single source of value?

Industrial output is not easy to measure, and its index is not linked to clearly defined institutions. This statistic is maintained by a norm, namely the previously mentioned idea that manufacturing is the only true source of value. According to Jean FOURASTIÉ (1959), a reputed economist, "We clearly see why we work. We work to transform nature into artificial objects that satisfy human needs, which otherwise would be poorly satisfied or not at all. We work to transform weeds into wheat and then bread, wild cherries into edible cherries, and rock into steel and then cars."

Declarations like this should be compared with the fact that agriculture employs but 7% of the labor force in France and industry 32,3%, as already pointed out. Furthermore, these figures count many administrative jobs, thus reducing further the number of those who actually work at transforming nature.

In developed societies, most people work in public administrations, banks, insurance companies, the wholesale and retail trades, advertising, the mass media, education, leisure activities. Obviously, their social utility does not reduce to the transforming of nature. The most brilliant civilizations were not necessarily industrial societies. We need but think of Italian city-states during the Renaissance or the "world economies" described by the historian Fernand BRAUDEL (1979). According to Jean-Marc OURY (1982), the conviction that value springs from production (in the strict sense of the word) stems from our overlooking a third ingredient that, besides capital and labor, is indispensable for making goods and satisfying needs, namely "vigilance". Vigilance enables us to detect the imbalances that generate the circulation of merchandise, and brings buyers and sellers into contact. It helps us anticipate breakdowns, ruptures in stock and technical failures in machinery (RIGAL & WEILL 1984).(2) Sentinels or hunters on the lookout seem to be doing nothing, but they are the ones on whom the tribe's security and supply of game depend.

Let us imagine the extreme case of a developed country without any raw materials, farming or industry. As disturbing as this picture might be, we have to admit that many of these activities are in the red in most countries, which, in fact, could obtain goods on the international market at prices lower than domestic costs. The strategic risks immediately come to mind, since the countries supplying goods could, during war- or even peacetime, impose restrictions or an embargo. Such preoccupations carry weight, but it is not so easy to assess them. They predominate in iron and steel and in shipping, two bloated sectors, far in excess of what is needed for defense purposes (GREM 1978).

Counting the unemployed is an institutional phenomenon related to the benefits served by the National Employment Agency (ANPE). It is easy to show the force of cultural factors in this field by making comparisons over time. The concept of "employment" has several aspects: a job, a pay, a social status. The etymology of the French word for work *(travail)* goes back to the idea of torture. In ancient Greece, work was what slaves did. French nobles were forbidden to exercise an activity for pay under the monarchy, an infamous act called *dérogeance*. The idea of the salutary value of work apparently does not date back farther than the 18th century in France (GROETHUYSEN 1977). The same holds for the idea of a linkage between a job, a means of livelihood and a social status. Is this linkage not changing imperceptibly owing to the longer time devoted to education, the ever younger age of retirement and the growth of activities related to associations and local life? Whatever the case, being unemployed is still a calamity, and the prince will be judged by what he does to limit the number of the jobless.
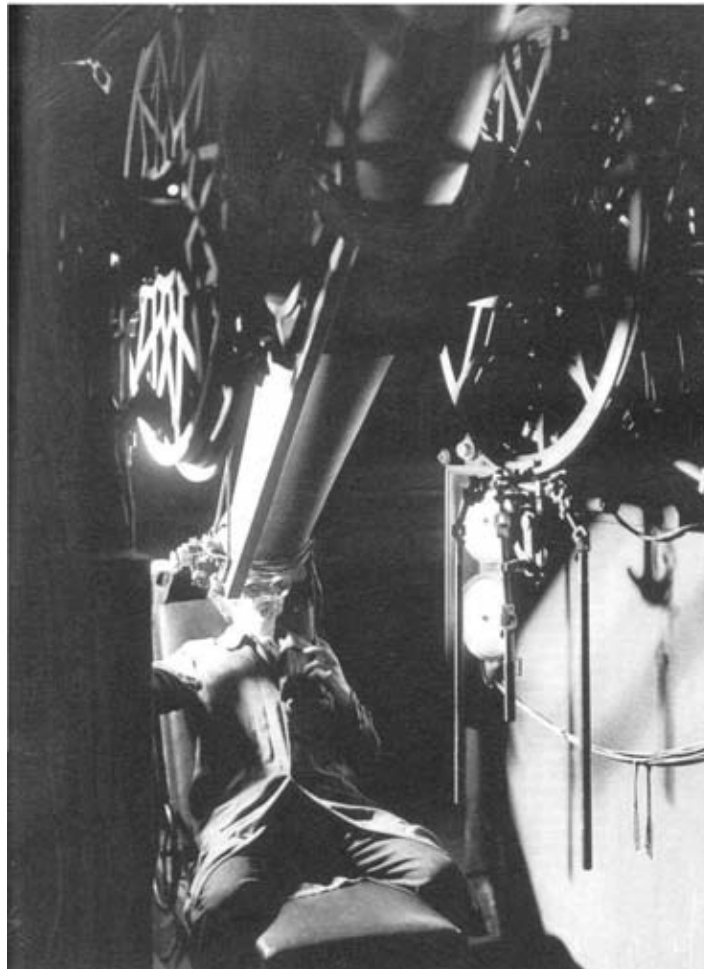
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(2) See, too, *Gérer et comprendre*, 2/3/4.

SLOT MACHINES, EARTHQUAKES AND OBSCURE ACTS OF BRAVERY

The conclusion to draw from these comments is that the prince wears whatever glasses he can, and sees those statistics that are maintained by powerful forces of resistance. The introduction of a new statistic has to overcome major blockages. Let us hypothesize that the prince, like any other manager, logically reacts to the parameters that he feels are used to judge him. We then see power as a vast mechanism governed by principles as forceful as the laws of nature. This view overdoes it, of course. Regardless of how overworked the "boss" might be, he always keeps for himself certain crucial issues that he takes the time to mark with his personal stamp. However this view is not any falser than the contrary one that sees the exercise of power only as a game between persons, ideas and passions.

Were we to adopt the mechanistic view, we would have to realize that it is not shielded from change, whether spontaneous or deliberate, as the findings of research in management prove. As explained, a parameter is maintained by four forces of resistance, but these forces use it in a diversely coherent manners. These forces are constantly evolving: materials owing to the progress of techniques, persons by ageing and changing, institutions under the brunt of new regulations, and cultural norms on their own. Consequently, a situation perceived as harmonious is bound to deteriorate.

This suggests the image of a slot machine, with its randomly rotating cylinders decorated with various designs. The player wins if the cylinders stop in an improbable pattern, for example lining up four lemons. This holds for the forces that determine and modify managerial parameters. In management, the cylinders rotate spontaneously, and a winning position is ephemeral. For example, a company, realizing its technology is obsolete, modernizes machinery. While doing so, it realizes that too many people on staff are too old to learn the new methods. It hires young people, but they do not accept the hierarchical relations which their predecessors put up with.

Another analogy comes to mind, one borrowed from geology. Earthquakes result from an accumulation of elastic energy owing to the contact of two masses of rock that a resistance owing to friction keeps from sliding over each other. Once this resistance is overcome, the accumulated energy is suddenly released with sometimes devastating effects, as we know. Likewise, organizations might cover their eyes to keep from seeing the gap widening between two of the four forces of resistance. Suddenly, a change reduces this gap, perhaps with losses and much noise, by introducing a new point of friction with one of the other forces spared by the quake. There might even be incurable patterns, gaps without any outlet. In such cases, officeholders are not totally helpless. They can anticipate quakes by exercising vigilance and supporting gradual adjustments. They can use the quake to introduce well thought-out reforms. They can help others understand the complexity of these phenomena and turn them away from crude, simplistic remedies.

Transposed to the affairs of state, these comments open several lines of thought. How did ancient sovereigns supervise their affairs? What criteria were forced on them for judging and making choices, and with what effects? How did these criteria emerge, and vanish? To the best of my knowledge, these questions have not been asked in these terms, although we can probably find answers in the works of historians.

This analysis also turns our attention toward the dis-

The prince wears whatever glasses he can, and sees these statistics that are maintained by powerful forces of resistance.

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creet efforts by those who, in the sphere of power, try to impede the making of decisions that would be too hasty and who devote thought to improving managerial tools for implementation under the right circumstances. The image that comes to mind is of Richelieu with Father Joseph, or of the 18th-century Enlightenment salons, where philosophy was discussed and the conceptions of the future assemblies of the French Revolution were patiently molded.

Finally, it should be borne in mind that the prince, especially in a democracy, is forced to see his land in the same way as public opinion. Voters, too, are decision-makers in a hurry. They want to justify their vote with a few simple criteria. This draws our attention to education. There is hardly any other means for turning people away from simplistic schemas, which stand in the way of making smoother transitions, than to teach them more demanding paradigms, whether they come from statistics, economics, history or philosophy. Through their efforts day after day, teachers, students, pupils and writers contribute to free the prince from the tyranny of his eyeglasses. ∎

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THE INTERNATIONAL STANDARDIZATION OF ACCOUNTING: THE RESISTIBLE RISE OF THE IASC/IASB

The International Accounting Standards Board and International Association for Statistical Computing produce information for investors. These private international organizations draw legitimacy for setting bookkeeping standards from the English-speaking world but have no power to actually enforce the standards they approve. They have to constantly prove their legitimacy and seek support from more powerful organizations, such as the International Institute for Facilitation and Consensus (IFAC), the International Organization of Securities Commissions (IOSCO) or the European Union, itself divided between a shareholder model (in English-speaking lands) and a partnership model (on the European mainland). The recent rejection of standards 32 and 39 suggests that supporters of the continental model are opposing specifications based on the Anglo-Saxon model

By **Bernard COLASSE**, CREFIGE, University of Paris-Dauphine

On 16 July 2003, the EU's Accounting Regulatory Committee (ARC) unanimously voted for the European Commission's plan for adopting the 34 standards of the International Accounting Standards Board (IASB) with the exception of standards 32 and 39 on accounting and the disclosure of financial instruments. Furthermore, ARC's rejection of two out of the 34 standards and its position on examining future standards proposed by the IASB set off commotion among accountants. Till then, it was thought that IASB standards formed a whole to be approved as such. This decision risks impeding the application, set for 1 January 2005, of IASB standards by the more than

seven thousand companies listed on EU stock exchanges. Validating ARC's opinion, Regulation 1725/2003 of 29 September 2003 ratified the IASB standards except for 32 and 39 and called for overhauling these two. Commotion also broke out in financial circles and even public opinion. Major newspapers, which normally show little interest in bookkeeping, now ran rather long stories.(1) Why was so much inte-

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(1) In the dailies *Le Monde* and *Le Figaro*. Even *Libération* devoted two articles in its 17 July 2003 issue to the event. These articles, signed by Grégoire BISEAU and Jean QUATREMER, bore titles in this newspaper's style, respectively: "L'Europe donne sa leçon de comptabilité" and "Un pataquès nommé IAS 32 and IAS 39".

rest shown in an event that, all things considered, carried little importance compared with other problems and trouble spots on the planet? Let us propose an answer: despite appearances, this event did not just concern bookkeeping practices. It was realized that, behind the standardization of accountancy, something else was at stake, namely governance in big firms and control over their access to international capital markets. As a consequence, this event began taking on meaning outside the realm of accountants. It raised questions about the new forms of regulation set up at the international level, about the place of new private players (such as the IASB) in this context of globalization – their powers, legitimacy, and relations with governments and intergovernmental organizations – and about the relations between the United States and the rest of the world.

These considerations suggest taking a closer look at the IASB, a mysterious organization till then unknown to public opinion. Owing to the IASB's relations with the EU, public opinion became aware of its existence. Let us start by looking back toward the IASB's origins so as to shed light on its identity as an international organization; and then we can review its relations with the EU.

THE IASC/IASB, A WEAK ORGANIZATION IN NEED OF SUPPORT

Since 2001, the IASB is the operational wing of the International Accounting Standards Committee (IASC), which, founded in 1973, drafts international standards.(2) The IASC/IASB is an organization without any powers of enforcement (WALTON 2001). To reach its goals, it embarked upon a strategic quest to find support and thus make up for the power it lacked. Undertaken without many resources, at least initially, this quest for backing was largely based on arguments framed in terms of competence, impartiality and independence.

An organization without power

Henry Benson, a partner of Coopers and Lybrand Corporate Finance in London, had the idea of creating what became the IASC. He intended to set up an organization for drawing up standards to be adopted in several countries so that national accountancy specifications would gradually converge. This convergence, called "harmonization", is to be distinguished from standardization, which is intended to apply identical standards for uniformizing accounting practices in a geographi-

(2) This factual information comes from www.iasplus.com.

cal zone. Harmonization, on the contrary, supposedly authorizes a variety of practices while trying to establish equivalences among them. Though, in principle, less restrictive than standardization, harmonization is a watered-down version of standardization – a first step toward it (COLASSE 2000), as the IASC's history proves.

Benson persuaded the Institute of Chartered Accountants of England and Wales (ICAEW), which he had presided, to invite professional bodies from various countries to take part in setting up the new organization. Professional groups from the following countries accepted: Australia, Canada, France, Germany, Japan, Mexico, Netherlands, United States and, of course, United Kingdom (along with Ireland). They participated in founding the International Accounting Standards Committee in 1973 with Benson as first chairman. As of 1974, new members joined, among them: Belgium, India, New Zealand and Pakistan.

Let us take stock: the idea of forming the IASC came from a senior partner in a major corporate group; the IASC was created on an initiative from the British accounting profession; and its founding members represented this profession from eight wealthy countries with quite different accounting practices. By simplifying, we dare say that its initial members followed one of two accountancy systems (COLASSE 2002): the "Anglo-Saxon model" used in

Two systems of accountancy competing at the international level		
	The "Anglo-Saxon shareholder model"	The "continental partnership model" on mainland Europe
The users of accounting information	Mainly investors	A wide range of parties: creditors, partners, the government, personnel…
Priority among bookkeeping principles	The principles of "true and fair view" and of "substance over form"	The principles of regularity (compliance with the law) and sincerity ("good faith")
The latitude left to professionals	Wide	Narrow
Relations between accountancy and taxation	Weak	Strong
The role of accounting	Assist decision-making	Present and audit accounts

Table 1

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"The nine initial members of the IASC followed one of two accountancy systems (Colasse 2002): the "Anglo-Saxon model" used in English-speaking lands (Australia, Canada, the United Kingdom and United States) or the "continental model" used on mainland Europe (France and Germany), with predominance of the former: these characteristics of the IASC, present at its foundation, affected its strategy and future" (Office of the Bank of America).

English-speaking lands (Australia, Canada, the United Kingdom and United States) or the "continental model" used on mainland Europe (France and Germany). The predominance of the former grew when new members from former British colonies joined in 1974. As we shall see, these characteristics of the IASC, present at its foundation, carry weight in its strategy and future.

As an international professional organization, the IASC was unable to impose its standards – not even in those countries with accounting organizations belonging to it. The national organizations only pledged to tout its standards in their homelands. In countries where the accountancy profession did not have the power to set standards, IASC standards could be applied only if they were not at odds with national regulations. This was the case in France, represented on the IASC by the Ordre des Experts-Comptables and the Compagnie Nationale des Commissaires aux Comptes. Neither of these organizations had (or have, for that matter) the power to set standards. This power belongs to the Conseil National de la Comptabilité (henceforth CNC), an assembly whose members represent various parties concerned with bookkeeping. At preset, the CNC has 58 members, representing public authorities, the accounting profession, firms in all branches of industry and – unique in the world – labor unions.

IFAC's backing

Aware that it exercised only the power to influence in most countries, the IASC tried to draw up sufficiently open standards that would not be incompatible with national accounting regulations. Some of these standards were designed to fill gaps in existing regulations. These gaps became nooks where the IASC proved its competence: for instance, the question of consolidated accounts at a time when this practice did not exist in many lands. Since national regulations said nothing about consolidating accounts, several French firms, under pressure from the Commission des Operations de Bourse (the French securities commission, henceforth COB) preferred using IASC instead of American standards. This earned a reputation for the IASC.

The IASC won its first laurels in 1982 when the International Federation of Accountants (IFAC) recognized it as the "global accounting standard-setter". Founded in 1977, IFAC grouped, at the time, auditing organizations from approximately sixty countries. It was devoted to promoting international auditing standards and training auditors. IFAC's backing had two advantages for the IASC. For one thing, it considerably extended the latter's worldwide influence. For another, it allowed the IASC to open its doors toward developing countries and no longer appear to be a club of wealthy nations. IFAC decided to cover the costs of participation in ten IASB board meetings per developing country and to sponsor means for the others to participate from a distance. Thanks to IFAC, the IASC reinforced its international base despite being, fundamentally, an organization without power.

Toward the mid-1980s, the IASC experienced difficulties, as questions arose about its utility. These difficulties were, by and large, related to European efforts during the 1970s to harmonize accounting practices, as the EC's fourth and seventh directives (1978 and 1983) gradually went into effect. The fourth deals with the objectives, presentation and contents of the annual accounts of "companies limited by shares or by guarantee". Though drawing from the continental system, it made room for certain principles from the Anglo-Saxon system, in particular, the principle of "true and fair view". The seventh directive on consolidated accounts borrowed more heavily from the same system, in particular the principle of (economic) substance over (legal) form. These directives came out of a sort of compromise between the Anglo-Saxon model, advocated by Great Britain, and the continental one, defended by Germany and France (Table 1). Their contents were carried over into the legislation of member states with more or less distant deadlines. As they were enforced, in particular the directive about consolidated accounts, the IASC lost its preferred field of action and any hope of seeing its standards applied in Europe. To survive, it reoriented its activities toward developing countries (WALLACE 1990). However its standards, mainly designed for big firms, were not very convincing for companies there. It managed to find a new orientation thanks to the International Organization of Securities Commissions (IOSCO).

The IOSCO's backing

The IOSCO federates all regulators worldwide of national capital markets, including the powerful American Securities and Exchange Commission (SEC) and French COB. Like the IASC/IASB, this "club of security commissions" (PÉRIER 1995) only has the power to influence, but it wields powerful influence owing to the SEC's participation. The

IOSCO supports standards for facilitating international operations on financial instruments, accounting standards in particular.

The IASC was more or less in competition with the IOSCO. Had the latter drawn up its own standards, the IASC would have been pushed out on the margins. In the late 1980s for example, dealings between the two organizations led to the IASC becoming the standard-setter for the IOSCO, which let it be understood that it would eventually adopt the standards after modification. This deal endowed the IASC with strong legitimacy in capital markets, in particular American ones.

Meanwhile, the IASC was reorienting its activities by adopting a "conceptual framework". A conceptual framework is a coherent set of objectives, principles and concepts for standard-setters to use. To a certain extent, the latter can deduce standards from this framework – an act of deduction unlike the emergence of standards out of generally accepted practices. In 1989, Exposure Draft E323 on the comparability of financial reporting defined this new orientation. Accordingly, modified standards and future standards should no longer contain options. Instead, they should indicate for each problem a "benchmark treatment" and a secondary "allowed treatment". Tightening standards to make them more coercive was a response to financial market requirements. However it increased the risks of standards being incompatible with national regulations.

The adoption of an American conceptual framework

The *Framework for financial reporting*, published in 1989, was a throwback to the one that the Financial Accounting Standards Board (FASB), the American standard-setter, had adopted in the early 1980s. Paragraph 10 asserts that investors rather than other parties should have priority in accessing financial records. According to it, financial reporting is unable to satisfy all the needs of those who use the information even though all users do share some needs. Since investors bring capital at a risk to firms, providing them with financial reports that suit their needs is a way to satisfy most of the needs of any other users. In short, what is good for investors is good for everyone! Left unsaid was that the IASB, like the FASB, adhered to the Friedmanian conception of corporate responsibility. Accordingly, a firm's responsibilities are purely economic, and it has to justify its actions to shareholders alone. This allegiance, problematic in and of itself, to the FASB's conceptual framework and thus to the orientation of accountancy toward shareholders satisfied the American dominated IOSCO.

To meet IOSCO requirements and try to become its standard-setter, the IASC took a turn toward the

"Anglo-Saxon" model (HEEM & AONSO 2003). Apart from its relations with the IOSCO, its aim was to be in the good graces of the SEC and American capital markets. For its part, the SEC declared that it would recognize IASC standards about financial reporting and consolidated accounts, standards very close to the FASB's.

Collaboration with the IOSCO

Collaboration between the IASC and IOSCO took shape in the early 1990s. Paradoxically, the IOSCO would take its time before recognizing IASC standards. In 1994, its technical committee, headed by the president of the French COB, announced that it was ready to accept the standard on financial reporting. In its opinion, fourteen other standards had already reached the required level of quality; but the remaining ones should be improved, and work should start on new standards.

Various reasons account for what looks like a turnaround by the IOSCO and a semifailure for the IASC. Nevertheless the major stake in setting up international accounting standards is (and is likely to remain), we assume, the access of non-American firms to capital markets in the United States. In the 1990s, some firms that were not American had started applying the Generally Accepted Accounting Principles (GAAP) in order to meet the requirements for being listed in American stock markets.(3) Consequently, the Americans thought that the IOSCO's strategy of supporting IASC standards was no longer worth pursuing, since American standards were going to prevail (WALTON 2001).

This turnaround did not discourage the IASC however. It maintained contacts with the IOSCO. In 1995, during the latter's annual congress in Paris, the chairmen of the IASC and of the IOSCO's technical committee announced a new program for the IASC. The accomplishment of this program, scheduled for 1999, was to lead to the approval of IASC standards by the IOSCO. This new commitment by the IOSCO can be set down to the refusal of some of its members to leave firms in their countries adopt the GAAP. For them, IASC standards, though close to the GAAP from a technical viewpoint, represented a political alternative to American standards.

The long and short of it is that the IASC was able to take advantage of dissensions inside the IOSCO and of the opposition of certain members to American standards. The IOSCO ended up adopting IASC standards, but this did not mean that they would be applied in countries belonging to the organization. The IOSCO, an international body under private law, does not have any more power than the IASC. The situation in the EU is completely different. The EU is an interstate organization capable of enforcing its decisions on member states. This accounts for its interest in the IASC, since it could make up for the latter's lack of enforcement powers.

Before turning our attention to relations between the IASC and EU, let us take a brief look at the rhetoric used by the IASC/IASB in its quest to obtain the legitimacy and backing needed to expand its power and reach its objectives.

The rhetoric of competence, independence and impartiality

Rhetoric is the art of convincing through words or deeds. For want of other means to obtain and maintain the backing needed to reach its objective of setting standards, the IASC/IASB always based its arguments on competence, independence and impartiality. To illustrate this rhetoric, we shall take as examples the IASC/IASB's conceptual framework, its "due process" procedure for drawing up standards and its recent organizational reform.

By adopting in 1989 a conceptual framework, the IASC/IASB asserted its theoretical competence and determination to provide scientific grounds for its work on standards. This assertion has been validated in part only, whence its rhetorical facets. The conceptual framework is far from a coherent accounting theory, even admitting that such a theory is possible. Besides, several standards contain items in contradiction with the framework. Standard-setters, if they want to see their standards applied, have no other choice than to take existing practices under consideration; and these might be far out of line with standards obtained by direct deduction from a pre-existing theoretical framework. Moreover, they cannot ignore the many effects, economic but also social, of the standards set (ZEFF 1978). Nonetheless, a conceptual framework may well create the illusion of being scientific and become a source of legitimacy that is all the more useful when there is no other (PEASNELL 1982).

Through its due process, the IASC/IASB tries to involve all parties in drafting its standards and thus prove its impartiality.(4) Once again, rhetoric plays a role. It is not possible to imagine making the IASB shift its position unless the primacy granted to investors in its conceptual framework is accepted.

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(3) The FASB now drafts these standards.

(4) Drafting a standard is a ritualized procedure: the publication of preliminary documents, in particular, an "exposure draft". This procedure is a way to organize lobbying.
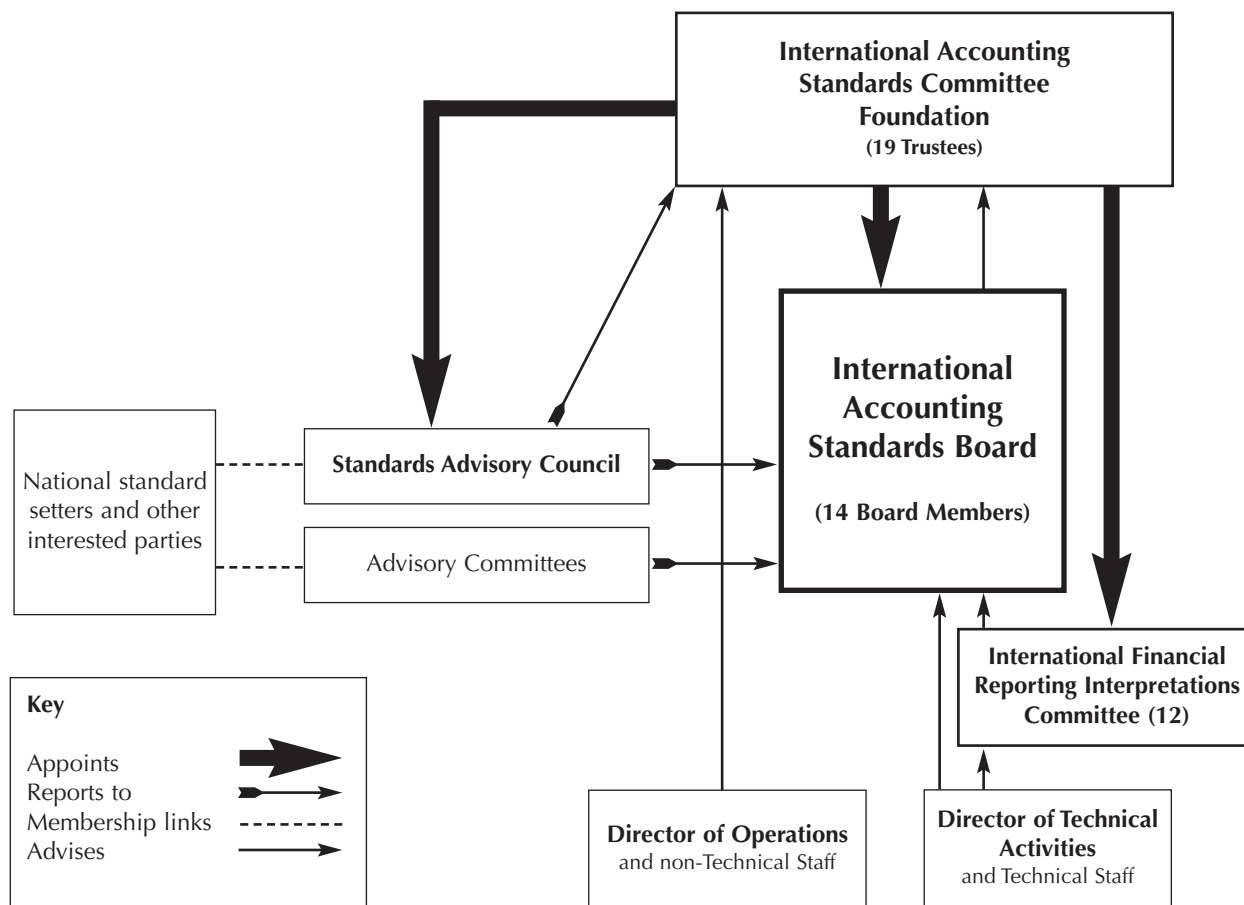
Figure 1 : « La nouvelle structure (2001) de l'IAQSC »

Furthermore, only parties disposing of adequate financial resources or the necessary technical qualifications can actually intervene in this due process and hope to have their voices heard by the board. Other parties are passive onlookers during negotiations between these powerful players and the IASC/IASB. Though lacking proof, we might suppose that the "big four" exercises a nonnegligble, direct or indirect, influence on the IASC/IASB during due process, since they have the doctrinal and financial resources for effectively playing a part and lobbying.

A final point: the IASC/IASB could obtain recognition from the organizations whose backing it sought only if it appeared independent. This probably explains its structural reform in 2001(5) This reform released it from oversight by the accountancy profession alone(6) while keeping it at a distance from national standard-setters. Its structure (Figure 1) was copied after the FASB's. The IASC is now a foundation with nineteen trustees representing parties directly concerned with standardizing international bookkeeping rules. These trustees appoint the four-

teen members of the IASB. Once appointed, these fourteen board members are supposed to be fully independent. This leads us to wonder what is meant by independence and whether it is possible.

Who can claim to be independent? We always depend on our background – training, experience, social environment, etc. Ten of the fourteen board members, coming from the English-speaking world, are familiar with the accounting model used there. Without casting doubt on their integrity, we wonder whether they are independent from that model. Even admitting that an organization like the IASB could be independent, it would still face questions about its legitimacy. To whom is it accountable? Who evaluates it? How paradoxical that an organization setting accounting standards does not have to account to anyone!

A last point about its rhetoric, the IASC/IASB borrowed its arguments about competence, independence and impartiality from the FASB. It merely transposed this rhetoric to the international level.

(5) For the IASC/IASB's new "constitution", see www.iasb.org.uk.

(6) IFAC appoints five of the nineteen trustees, two of whom have to "normally be senior partners/executives from prominent accounting firms" – from the "big four"?

THE IASC/IASB'S RELATIONS WITH THE EU

The IASC/IASB's relations with Europe, first the EEC and then the EU, have always been rife with ambiguities.

Very ambiguous relations

Recall, from our brief history of the IASC, that it was created while Europe was setting out on a program for harmonizing member states' accounting regulations. Was this by chance? Some pundits do not think so. On the contrary, they believe that this creation, which the big accounting firms and the British profession wanted, was intended to counter the European initiative. However it failed to do so, since the directives adopted by the EU reflected a sort of legal compromise between the continental and Anglo-Saxon models. This explains the difficulties encountered by the IASC in the mid-1980s. It was losing – only temporarily, as time would tell – possibilities for applying its standards in EEC member states.

Fortunately for the IASC, the harmonization of accounting in Europe ran aground during the 1990s. National regulations stemming from the fourth and seventh directives became obsolete once confronted with the requirements of expanding capital markets. It was urgent to modernize them. As it turned out, this modernization could not be achieved quickly by using the unwieldy process of issuing directives. Some experts advocated setting up a European accounting standards board as a counterpart to the powerful American FASB. However the European Commission was more concerned with introducing a single currency than harmonizing bookkeeping practices; and it left time drift by. More and more European groups embraced either IASC or American standards. As a consequence, the IASC could present its standards as an alternative to American ones, propose its services to the European Commission, the EU's executive branch, and try to appropriate the power to set standards in the EU.

Europe outsources the setting of standards

In 2000, the European Commission responded to the IASC's proposals and drafted a new strategy for harmonizing accountancy. This redefined relationship with the IASC may well be described in terms of outsourcing. In a communication of 13 June 2000, the Commission recommended that firms listed in Europe apply IASC standards by 1 January 2005 at the latest. A European regulation of 19 July 2002 confirmed this strategy. IASC/IASB standards would not, it was understood, enter into application unless they were in the EU's interests, a condition implying a procedure for approving them.

At the core of this approval procedure was a specially created Accounting Regulatory Committee, made up of representatives from EU member states. ARC, despite its name, is not a technical standard-setting agency but a political body – plans for setting up a European accounting standards board remained on the drawing board. Before deciding whether to accept or reject an IAS/IASB standard, the European Commission has to submit it to ARC, which formulates an opinion based on a qualified majority vote. If ARC approves the standard, the Commission adopts measures for applying it. To assess IASC/IASB standards, a committee of experts set up in June 2001 on an initiative from the private sector assists the Commission. Since this European Financial Reporting Advisory Group (EFRAG) oversees the drafting of standards for submission to the European Commission, it can intervene with the IASB whenever it deems fit.

This approval procedure was tested for the first time in July 2003. ARC was to give its opinion about the set of IASC/IASB standards that were to enter into application on 1 January 2005 in big firms listed in the EU. For the IASC/IASB, corporate accounts were to be declared in compliance with its standards only if all its standards were applied. The rejection of two out of the 32 proposed standards thus became a major obstacle to implementing IASC/IASB standards, whence the astonishment of business leaders and IASC board members. Why were the two standards rejected?

The rejection of standards 32 and 39: From the protests of banks and insurance companies to…

Standards 32 and 39 propose assessing financial instruments at their "fair value" (MISTRAL 2003). Invoking this notion is logical if the intent is to produce information for investors in line with the IASC/IASB's conceptual framework. However, applying the fair value criterion has many disadvantages and raises tricky technical problems. Practitioners and academics have abounded in writing about these handicaps (in French for example, CASTA & COLASSE 2001); but board members seemed to have ignored this literature.

The main disadvantage of fair value, when set by the market (thus presupposing existence), is its volatility, so extreme that the performance of firms as measured by accountants is highly unstable.

When not set by the market, it has to be calculated by using a model that might prove inadequate for several reasons. The underlying hypotheses might not be satisfactory. Implementation might be faulty. The

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"The main disadvantage of fair value, when set by the market (thus presupposing existence), is its volatility, so extreme that the performance of firms as measured by accountants is highly unstable" (The Enron Towers).

parameters might not be right. Or the model might not be sturdy or stable enough. Besides these involuntary causes, there might be other, voluntary, ones… Managers might be tempted to manipulate the model on their own behalf and practice a "creative accounting" with "high risks" for investors.(7) Small varia-

tions of the parameters might cause significant variations in the value calculated.

The sectors the most sensitive to these disadvantages

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(7) The US Senate report on Enron used the phrase "high-risk accounting" (for investors) to describe the firm's bookkeeping practices.

were banking and insurance. Central banks reacted first: the Federal Reserve Board in April 2000 and the Basel Committee on Banking Supervision in May 2000. Their conclusions, though qualified, were clear. Standard 39 was not appropriate for bank balance sheets, and its application would impede supervision over this sector. The presidents of big European banks formulated a sharp but technical response. In a letter of November 2002, they strongly criticized the contents of standards 32 and 39.

In like manner, big European insurance companies voiced their opposition to the two standards. A peculiarity of insurance companies is that they cannot negotiate most of their liabilities (consisting of commitments made to clients) in the marketplace. Assessing the fair value would imply using models based on choices, in particular, about the discount rate. These very hard to make decisions would have a considerable impact on assessing liabilities. The IASC probably did not understand the peculiarities of this sector, which, in continental Europe, has kept (partly) out of the capital markets. France, for instance, has several mutual insurance companies.

Regardless of the technical points they raised, bankers and insurers were also objecting to the IASB's due process procedure for drawing up standards, which it had copied from the FASB, pointing out its limits and thus exposing its rhetoric. A point in the IASB's favor should be mentioned: EFRAG had not fully played the role expected of it.

The controversy that broke out took a political turn when the French president intervened, an intervention that drew public attention to the international harmonization of accounting practices. Till then, the discussion of this issue had been restricted to a small circle of specialists.

…Political reactions

On 4 July 2003, President Jacques Chirac sent a letter to Romano Prodi, the Italian president of the European Commission, to alert him that "Certain accounting standards now in the process of adoption in the European Union risk leading to an increased financiering of our economy and to methods of corporate governance that put a premium on the short term."

For the first time, a top-ranking French politician intervened directly in a debate about accounting and thus brought it out of the professional circles where it had been confined. We assume that this intervention influenced, to a degree, ARC's decision of 16 July 2003. President Chirac's arguments were not technical. Instead, they placed the debate in the political arena. They had to do with corporate governance by investors (*i.e.*, capital markets) – a governance with

limits, as several affairs, starting with Enron, had shown.

The French president was criticizing not just IASB standards but, even more clearly, the Anglo-Saxon conceptual framework, from which they had been deduced, since it placed shareholders' interests above what legal experts call the public interest. This reaction, we notice (even if we cannot prove this relation), occurred in a time of tension between "old Europe" (8) and the United States about the war in Iraq. As it turned out, "old Europe" was advocating a different accounting model than the Anglo–Saxon one and had, belatedly, decided to defend it.

Organizational resilience

To summarize, the rejection of standards 32 and 39 by the EU's Accounting Regulatory Committee served as a litmus test for the problems and contradictions that afflicted the IASC/IASB (almost) since its creation but that it has always managed to overcome. As an international organization under private law, the IASC/IASB lacks any powers for enforcing the standards it sets. As a consequence, it has to constantly prove its legitimacy and look for support from more powerful organizations. It obtained backing, of various sorts, from IFAC, the IOSCO and EU. IFAC's endorsement expanded the potential field for applying IASC standards. IOSCO's legitimated the IASC in the eyes of capital markets, even though the SEC still did not recognize its standards. The EU's backing enabled it to indirectly wield power by having its standards enforced in Europe.

The IASC/IASB, drawing its legitimacy from the English-speaking world, has set standards for producing information for investors. As a "subcontractor" for the EU, it received powers of enforcement from a Europe that is divided between two models of governance with their associated bookkeeping systems, the "Anglo-Saxon shareholder model" and the "continental partnership model". Moreover, this accounts for the IASC/IASB's difficulty in fully satisfying EU requirements about the principal in a transaction. When put in relation with Chirac's intervention, the rejection of standards 32 and 39 signals the opposition by advocates of the continental model to a far different system.

However the IASC/IASB has always proven capable of skillfully handling the problems it encounters. It is, given its uncommon ability to survive, a quite special case of organizational resilience. We bet that it will very quickly amend the two standards in question. And on 17 December 2003, it did release new ver-

(8) Donald Rumsfeld used the phrase "old Europe" to refer to the European countries that opposed using force against Iraq.

sions of standards 32 and 39. At the time of publication of this article [March 2004], ARC had not yet pronounced its opinion on them. The IASC/IASB dare not indulge in a conflict with the EU, since this would likely postpone applying its standards in member states. Nor dare it risk a breach of relations, since its means of action are at stake. But afterwards?

Will the IASC/IASB go so far as to revise its conceptual framework and draw back from the American model, thus risking to disappoint the IOSCO and lose the possibility of having its standards recognized by American capital markets? Probably not. In fact, it is now working with the FASB(9). Might it not be secretly betting that, in the context of globalization, the Anglo-Saxon (specifically American) model will eventually win out over the continental one? Given the power of American money markets, such a bet is not senseless. Europe's inferiority in accounting also follows from the relative weakness of its capital markets (VÉRON 2003). Finally, the IASB might be hoping that the amendments to standards 32 and 39 will satisfy ARC and that it will not have to revise its conceptual framework.

The might of the weak

Given that the IASC/IASB will probably manage to overcome obstacles once again, we wonder what is the driving force behind an organization that winds its way in the midst of presumably much more powerful organizations. In other words, what is the might of the weak? What are the causes of this force?

Might it be the ability of manager to maneuver? Undoubtedly: IASC/IASB's successive chairmen have proven their mettle, and the current chairman is not the least pugnacious of the lot. Might it be the inertia of big, governmental or intergovernmental, bodies caught up in their own procedures (COHEN 2001)? The bureaucratic workings of the EU are probably not a negligible factor in the IASC/IASB's success. Or might it be the smoldering conflict between big international organizations that has opened strategic opportunities for it? In effect, the interests of the IOSCO and EU do not converge. Finally, might it be the EU's lack of ambition, visible in this field as in

many others, or its fear of internal conflict? By outsourcing the harmonization of accounting standards, it has more or less externalized a potential point of contention that could set France and Germany at odds with Great Britain.

The might of the weak is often grounded in the indecision or weakness of the strong, who mutually neutralize each other. This might well be what has made the IASC/IASB's resistible ascension so irresistible. ■

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(9) Under the Norwalk Agreement of October 2002, the IASB and FASB decided to coordinate future programs. In November 2002, they adopted a "short-term convergence" program for settling points of divergence between their standards. Naturally, all this increases Anglo-Saxon influence on the IASB.

THE GLOOMY SIDE OF PROJECTS: WHEN WORKING ON A PROJECT JEOPARDIZES INDIVIDUALS AND GROUPS

OVERLOOKED

In writings on management, projects represent the myth of fortune smiling… Invest in your job! Find self-fulfillment through involvement in the project! But does a project not also destroy meaning, destabilize personnel and convey the germs of new pathologies?

In companies, projects are machines for making requirements and judging people. No doubt, there is a gloomy side to projects, as shown by this analysis of verbatim accounts from participants in projects and a review of the scant managerial writings on this topic. For working conditions to worsen in direct proportion to an increase in the stimulation to outdo oneself through involvement in a company project, something must have gone awry in the realm of human resources – at the very heart of capitalism.

By **Alain ASQUIN***, **Gilles GAREL**** and **Thierry PICQ*****

This article explores the gloomy side of projects not to deny their worth to a company but to convince firms to pay closer attention to the effects on individuals and groups. In particular, we would like to urge human resource departments to monitor these effects.

Project-related practices have spread so widely that Luc BOLTANSKI and Eve CHIAPELLO (1999) consider projects to be the core ideology of modern capitalism. This holds in law, education, psychology, politics, management… in line with Jean-Pierre BOUTINET's

(1990) view of projects as a general metaphor for life in contemporary society. The instructions to become involved and the promises of self-fulfillment, conveyed in certain writings on management, create the myth of fortune smiling through the project. The very vocabulary used in project management has

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OVERLOOKED

connotations: surpassing oneself overcomes stress; counseling or coaching takes the place of authority; steering a project replaces control functions. A project turns wage-earners into "actors", a word connoting an autonomy with which individuals are supposedly endowed and that enables them to join in and make the project a success.

This "managerially correct" language raises questions. It fits into a process of idealization, as described in Boutinet's preface to the new edition of his *Anthropologie du projet*. When reading verbatim accounts collected from persons involved in projects, we come to see the collateral damage to human resources.

Suffering

Concern about the stress related to projects can be seen in the growing body of professional and academic literature, sometimes relayed in the media, about "suffering at the workplace" (ASKENAZY 2005, DEJOURS 1998; HIRIGOYEN 1998; NEVEU 1999). According to it, firms have upped the ante on organizational innovations without taking individuals into account.

"The nature of work has changed, becoming more fluid, flexible and reactive, and surely more interesting for many wage-earners. However this has brought along something new: pressure. Various indicators show that working conditions are dangerously deteriorating due to mounting pressure: the worrisome rise in absenteeism, mental pathologies, occupational illnesses, work-related accidents, even suicides and, to an extent, on-the-job alcoholism and drug-abuse" (ASKENAZY in IMPÉRIALI 2005).

Projects are not exempt from these devastating effects, quite to the contrary! As concentrated work, a project exacerbates problems that exist under normal conditions (GAREL *et al.* 2004). In addition, it generates problems of its own, such as the "grief" felt when an assignment ends (DUBOULOY in ASQUIN *et al.* 2005).

Gathering information outside the occupational context

Teaching training courses on project management provided us with the opportunity to glimpse the gap between the talk in firms and what people in these intercompany training programs had to say. We met persons at a time when they were able to stand back from their participation in a project and talk about their experiences. The gathering of these verbatim accounts outside the workplace or any assignment commissioned by higher-ups turned out to be a worthwhile procedure for reducing the inhibition stemming from the firm's idealization of projects. Benefitting from the atmosphere of acceptance or picking up on discussions in which they might not have dared to become involved had they been interviewed, these persons made strong, firsthand comments about the unexpected consequences of their participation in a project. The intensity of what they had to say came as a surprise. We wondered about the meaning of what they revealed through their words in this setting.

Our intention was to seize this opportunity to inquire into the suffering experienced during projects. As trainers, we arranged a series of exchanges for sharing experiences about the effects of projects on participants so as to detect the difficulties and risks encountered by them. Thanks to this exercise (repeated several times a day in groups of approximately thirty persons), we gathered more than two hundred verbatim accounts over a period of more than two years. Middle-level staff from various firms took part in these training programs. All of them had taken part in a project, either as project manager or team member. We decided to circulate these accounts in academic circles even if the message ran counter to the prevailing opinion.

Detecting categories of risks

Qualitative procedures adapted to the exploratory nature of our research were used, without any *a priori*, to analyze these verbatim accounts. The educational method gradually implemented during this exercise (individual reflections, work in small groups, voluntary reports) had the objective of controlling the sincerity of statements, since we had no prior knowledge of the experiences recounted. Efforts to create a setting of security and trust were conducive to sincerity in the talk about actual experiences. Participants sometimes voiced strong emotions. Of course, the requirement of the internal coherence of the data gathered in this manner has as a counterpart their accuracy and reliability (ALLARD-POESI *et al.* 1999).

We did not conduct interviews. Instead, we gave a form to exchanges between trainees. Since these exchanges varied in length and form, we adopted an open coding procedure (STRAUSS and CORBIN 1990). The objective was to discover, through a grounded theory approach (an inductive method developed in the 1960s in the United States), the types of effects that projects have on individuals and groups. In other words, the findings presented herein do not come from a research carried out following a pre-established plan. This article formulates hypotheses with a degree of relevance and coherence in line, at the very least, with what the trainees thought.

We detected three major risks, each presented in a section herein: individual risks related to excessive involvement in a project; the risks of destabilizing occupational identities; and the risks related to the pursuit of a career in the firm. Each of these three sections opens with a testimony that conveys the basic meaning of verbatim accounts about the risk in question. Each situation is then explained with excerpts from other accounts. This has led us to formulate proposals for future research to investigate.

THE RISKS TO INDIVIDUALS OF EXCESSIVE INVOLVEMENT

The requirements and pressure imposed by a project on individuals have clearly been underestimated. The accounts we collected suggest that individuals experience forms of violence for which they, paradoxically, might feel partly responsible. This diminishes their ability to withstand pressure and sets off a potentially destructive process of isolation.

Daniel's testimony: a project leads to burnout

What usually stands out in the verbatim accounts collected from persons who talked about their participation in a project (especially a big, successful one) is how much energy they invested. This focus on energy enters into the construction, after the project, of a lofty discourse about the experience. It evinces the literal surpassing of oneself under pressures of time, resources and specifications. The discourse thus constructed minimizes the heavy pressures experienced and, above all, denies the personal effects. The prevailing "project-oriented culture" inhibits the mentioning of difficulties – yet another reason why the information we collected outside the firm or any project-related context is so valuable.

• *A lofty sense of excitement*
Daniel, a 35-year-old engineer at a components manufacturer for aircraft, seized the opportunity to take part in a major company project. In his words, it came at the right time:
"This project was a kind of opportunity for me to take front stage. I was initially recruited to the project for about two days a week. I continued working the rest of the time for my department. It wasn't easy, because the two days were somewhat theoretical. It was necessary, after a snag for example, to free myself for a meeting on quality or to deal with a subject in an emergency during the time when I was supposed to be working on an assignment from my superior."

During this initial phase, Daniel admitted, he went along with a feeling of excitement:
"Knowing that your advice is expected, that you are needed, is downright gratifying; and the project head used that to keep pushing me to do a little more."

• *Torn between two worlds*
Daniel had to cope with two worlds that ignored each other. The first was his department, where the driving force was well-defined occupations with mid-run career prospects. This world was a part of his identity that he did not want to deny. For eleven years, he had developed a technical know-how now coveted by the project, the second world. After having worked on the project for (but) a few weeks, Daniel had the impression of developing relationships of a sort that he had never had with colleagues in his department. He had to provide spurts of energy, sort things out by himself, show he could manage on his own. As he was aware, all that fit into a short-term perspective. This hyperactivity did him good but also exhausted him:
"At the end of this period, after five months on the project, I started feeling tired, worn out. The initial excitement, which had enabled me to absorb a rather large amount of work, was followed by a phase of doubt. Given the project's demands, I was wondering what the limits would be…!"

• *Burnout*
As Daniel admitted, he could not stand it any longer. Besides the overload, there was stress, even anxiety. He had chosen to take part in the project because he had understood that it was a springboard for careers, since the firm wanted to identify staff members with potential. However the mounting difficulties risked making this exposure counterproductive. He reacted by doing even more lest others say that he had not done everything possible to accomplish his work:
"The pressure was enormous. The project head made me understand we were all in this together – we were collectively responsible for anything that might happen, anything positive and, too, any difficulties. That was the point where I dropped out. The pressure I had taken on myself, from my department for those long months, from the project head, and then from team members… it was too much. I was exhausted, drained, unable to spring back."

From excitement to the pressure trap

Daniel's story clearly illustrates the gradual, pernicious slipping from strong motivations to occupational burnout. As is recognized, projects demand strong commitments given their intrinsic characteristics: the challenge – in a break with routine activities – to mobilize energy for a limited time to work as part of

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"Knowing that your advice is expected, that you are needed, is downright gratifying; and the project head used that to keep pushing me to do a little more." (*L'Ascension vers l'Empirée,* **Jérôme Bosch, around 1500**)

a team in pursuit of a clear objective. Individuals feel "involved" intellectually (Their ideas contribute directly to the project), socially (They are part of a team) and, too, emotionally (Spending energy reinforces ties with the project and its team). When pressure mounts, this involvement and creation of meaning generate risks for participants. In the verbatim accounts, we detected three subcategories of pathologies related to project management: cornered participants, work-related risks and psychological suffering.

• *Cornering participants*

F. JULLIEN (2005:32), a philosopher and sinologist who has worked on efficiency and strategies, has described how Chinese generals "cornered" their troops into being brave enough to win battles. In a famous example, Hernando Cortez made the wager that burning his vessels so that a return could not be imagined would force his troops to conquer the New World for the Spanish crown. With respect to project management, TAKEUCHI and NONAKA (1986) have invoked

the image of assigning a team to the basement: senior management then takes away the ladder and forces the team to find on its own – under pressure from time, cost and quality – a way to climb back up. A general, like a project manager, does not ask whether his "teams" are brave or cowardly. What counts is not the characteristics of individuals but the conditions to be set up for cornering the team into working hard. Michael described his involvement in a computer project in a bank:

"You sometimes have the impression you don't have any choice. There's no other solution. Slog on, go forward, whatever the cost. A sort of accelerating spiral you can't break out of."

Pressure comes not only from superiors but also from deadlines, technical specifications, resource limitations and forms of organization. Lila, who took part in an in-house reorganization project said,

"You're going to spend the night if you have to, but you can't fall behind or else the others are going to do the same when you need them."

In pursuit of its objective, a project increases pressure because it multiplies contacts between individuals and augments the requirement to be an achiever. Subtle games of cooperation-vengeance can be observed that generate a pressure all the more intense and pernicious because it comes directly from team members.

• *Work-related risks*

Projects are pertinacious machines for making requirements and judging people. Persons who used to work without knowing each other in a sequential organization are brought together in a joint project where they are exposed to the view of others. As the social pressure on individuals mounts, its effects are all the more violent insofar as it is exercised by colleagues and team members. During the many project-related meetings, members have to make reports, analyze their mistakes, justify their choices and expectations. According to Marie, who took part in an industrial project in agribusiness,

"You're constantly being watched. You always have the feeling of being evaluated. It sometimes pushes you to go a little too far, especially in making promises."

The active involvement of clients or a prime contractor's representatives in a project intensifies pressure. The same holds for the presence of partners who also work with competitors. Stephen had this to say about an engineering project:

"When the client asks you a question, it's hard to say you don't know. This pushes you to make commitments without being sure you'll be able to keep promises."

Participants are also exposed to personal risks. Jean-Pierre about his experience in an advertising project:

"Usually, in a company, when people aren't happy, they complain, they gripe […] In a project, when you don't agree, the question other team members ask you right away is: what do you propose?"

The individual's ability to contribute to the project, to make proposals and suggest new ideas is at stake. The prevailing trend, supported by human resource offices, toward "individualizing" bonuses and sanctions (SEGRESTIN 2004; RETOUR 1998) bolsters this tendency. Participants are summoned to get in (contribute)… or get out (leave the project)!

• *Psycho-affective risks*

A project increases the anxiety related to "performance" and thus exacerbates the spirit of competition among colleagues. Very few studies have been made of the psycho-affective aspects of projects in terms of stress, burnout or even drug consumption (SOMMERVILLE and LANGFORD 1994; GÄLLSTEDT 2003). However projects represent a fertile field for analyzing the "right" amount of stress to be dissolved though action (DUBREIL 1993). Project management spawns several forms of stress (FLANNES and LEVIN 2001, 286):

– the stress arising from tensions and questions about "belonging";

– the stress due to solving problems in a pressurized situation;

– the stress caused by variations in the project's pace (bifurcations, shifts from the front line to fallback positions, from time for thought to the time of action, etc.);

– the stress of being directly watched by colleagues, of one's contributions being constantly evaluated.

Not everyone can bear up under the pressure brought to bear by project management. Some do, but others break down without any care or counseling being provided. It is hard to imagine retreating, or backing down, during a project. Daniel suffered from this sort of physical and psychological exhaustion.

THE RISKS OF DESTABILIZING OCCUPATIONAL IDENTITIES

In pursuit of cooperation across traditional organizational boundaries, a project blurs ordinary reference marks for occupational identities and disturbs the usual know-how. The effort to move beyond the "silo logics" of vertical integration (necessary in the quest for "systemic performance") should not make us overlook the need to "repair" identities at the end of a project so that wage-earners continue acquiring the expertise that the firm will surely require from them… during a new project.

Agnes's testimony: a project undermines the expert

Accepting to take part in a project is risky for the person's sense of identity. The more a sense of expertise is

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fundamental to wage-earners' occupational identities, the more a project risks destabilizing them. During a project, the individual does not communicate primarily with persons who have the same know-how, methods, habits and jargon. On the contrary, the specialist has to come to grips with his expertise and risk having it brought under question by people who do not have the same system of references.

• *The status of expert, a protective shell*
Agnes, a young architect, was asked to participate in a bold urban project in connection with a public transit system. The department of architecture selected her for her technical skills. She was to assist as closely as possible a project manager who was not specialized in this field. She said,
"At the start of our relationship, I appreciated our direct exchanges. The team was small. It was the very first weeks of the project. The project head was quite attentive to my proposals and warnings."
Agnes intervened as an expert, and was recognized for her know-how. The client recognized her as a guarantee of the quality of services and eagerly listened to her comments.

• *Dealing with nonprofessionals*
"The trouble started when the project head allowed persons with no connection to our specific preoccupations to attend our meetings. He asked for advice from an urbanist, whose concerns were far from the technical problems we had to settle, and from persons who use public transportation or who lived near the construction site. It's always a good policy to ask for opinions, but he made too much of their proprosals."
For Agnes, this phase was complicated, since she was facing persons who, although they had no legitimate power in the project, were going to make her modify complex technical arrangements based on her expertise and on the know-how of her department of origin. She began worrying as the project was "popularized".
"The project had to be a little daring. We were far below what we could do technically. I don't believe nonprofessionals are the ones who can really influence this type of project… Isn't that just courting popularity?"

• *Coping with the group*
The project's scope was growing, and the phase of execution had started. Agnes was still on the project but now as a team member and not just as an advisor to the project manager. This immersion in a larger group caused other difficulties, as she pointed out:
"I had the feeling my work was being watered down in this group. It was hard for me to clearly show my department what I had done, since proposals were reworked, modified. Even though I was the one who had to validate them ultimately, they were no longer fully mine."

Agnes was losing her exclusive, privileged relationship with the project manager, who was enlarging his circle of contacts.

Destabilizing individual and collective identities

Agnes came out of this experience deeply destabilized. She had started out with confidence in her skills and qualifications, and had been introduced as an architect with a reputation. She left the project with doubts. What had she achieved to be proud of? Some decisions made during the project were not in line with her conception of architecture, nor her department's. She would have to justify these decisions, which she found hard to accept, in discussions with departmental colleagues.
The persons involved in a project might undergo periods of doubt or apprehension, owing to their immersion in an unknown world. During a project, the recourse to superiors is not clear; the boundaries between specialties blur; and forms of coordination and cooperation often change. This causes anxiety.
We have detected three subcategories of pathologies related to the operation of projects: tensions among experts, the difficulties of experts understanding each other, and roving occupational identities.

• *Experts in their shells*
Various sorts of technical know-how do not spontaneously converge during a project. The know-how of the people involved does not automatically add up to a collective result: "There are too many cases where organizations know less than their members" (ARGYRIS and SCHÖN 1978:9). According to Jean-Jacques, who took part in an automobile industry project:
"People too often believe it suffices to assemble experts for them to work together. In jobs in the car industry, where occupations are traditionally strongly defined, that took years."
As the verbatim accounts, along with Agnes's testimony, suggest, experts will have trouble expressing their views and cooperating if the firm's human resource department does not handle problems related to occupational identities. Any "discomfort" experienced during previous projects is recalled, and the experts involved in the current project tense up and fall back on their specialties.
Several problems should be pointed out that worsen when experts are destabilized in their specialties.
First of all, the experts involved in a project have to learn to become teachers capable of explaining in simple terms to nonprofessionals the requirements related to their specialties. This calls for maturity, self-confidence and the right control over one's position in relation to others. Sylvia, who took part in a project for setting up a new public service:

These accounts […] bring to light the often cruel experiences of persons who took part in projects – in contrast with the enthusiastic talk and promising prospects that led them to become involved (*L'Enfer, dans Le Jardin des délices*, Jérôme Bosch, around 1500).

"When a computer scientist talks, it's usually to explain that technical requirements, incomprehensible to you, are the reason your idea isn't feasible. It's also a way to cut off the discussion."

Destabilized experts withdraw from cooperating into their shells.

Secondly, experts have a hard time expressing their know-how in an assured, definitive way in a new

setting. Michael said this about his participation in a logistics project in agribusiness:

"How do you want me to anticipate safety measures if I'm not familiar with the final product's precise characteristics!"

Experts might not produce what is expected because their know-how is taken to be an absolute. Their way of expressing reservations seriously diminishes the relevance of what they say.

Finally, know-how emerges during the project from doing, from practice; but it might be fuzzy, poorly defined and hard to formulate. Given these difficulties, destabilized experts might say nothing, like Matthew during a project in pharmaceutics:

"I preferred not giving an opinion rather than backing solutions I'm not sure of."

Experts should be helped to build up their know-how through participation in a project. They should not experience a project as a situation for making compromises without any possibility for enhancing their expertise. Human resources should consider adopting the dialogic principle of "differentiating in order to manage better".

• *The difficulties of understanding each other*

Besides the difficulties related to any act of creation by an individual, problems of intercomprehension arise during the process of group creation. A lack of comprehension, or even of expression, between parties is significant when it occurs while a solution to a problem is being collectively designed. Experts might remain shut up inside their own shells to the detriment of the collective project. Only by becoming aware of this will they be brought to reinvest energy in the project. According to Hector, who was part of a mechanical engineering project:

"It took me six months to understand why the technical solution I was proposing for the machines caused enormous problems of installation in the shops. I had to make a proposal for a gradual, less efficient approach that met the physical requirements for installing the machines."

Besides the difficulties of understanding each other in the project team, there are problems of mutual understanding with colleagues in one's department. This might lead to a questioning of occupational identities. According to Valerie, who was involved in a marketing project in pharmaceutics:

"We found, on the project, a formula that placed me in an awkward position in relation to our usual practices. I was criticized for not following procedures, which would have been much too complicated and too long for the project. I was almost considered a traitor by my colleagues in the laboratory."

• *Roving occupational identities*

Some people, when torn between a project and their original occupation or profession, make a clear-cut choice in favor of the project and gradually leave behind the "right" practices developed in their specialty. In this case, the groups built upon occupations and specialties will no longer recognize the individual as a reliable spokesman. In turn, the individual no longer finds a place in relation to the rules and regulation of his occupation or specialty, which he now deems too rigid and discrepant with the project's (contingent) requirements. As the number of work groups cutting across traditional boundaries increases, occupational identities splinter; and individuals lose their bearings. Thierry, who was involved in a computer project in telecommunications, had this to say:

"After five consecutive projects, I feel less and less like a telecommunications engineer but more and more like someone who designs made-to-measure solutions."

When projects tail each other, feelings of belonging become temporary, unstable and contingent (MARTIN 1992). Occupational identities develop in a fluctuating, fragmented context, which might be contentious and heavily dependent on special conditions or opportunities (KILDUFF and MEHRA 1997). Anne-Marie, who took part in a project in a hypermarket retail chain, pointed out:

"Some go back to their job as an expert after the project, and have to find their bearings and habits. Others have the chance to go on to other projects… and their original ties come undone."

Traditional solidarity based on belonging to an occupational group is replaced with a sense of solidarity that, based on a network, is opportunistic and intermittent. Depending on his behavior and qualifications, the individual might, or might not, benefit from belonging to such a network. In the words of Jean-Paul, about his experience in a construction engineering project:

"The international project in a hostile land left marks. We lived through so much together! Some clearly said they never wanted to go through that again. But others, like me, still have close contacts. We're ready to leave again at the first chance."

ROCKIER CAREER PATRHWAYS INSIDE THE FIRM

Work on a project risks jeopardizing the development of skills and qualifications, and impairing careers.

Alberto's testimony: A project breeds vulnerability

Companies often try to boost participation in projects by presenting them as springboards for careers. However these intense efforts to sell a project seldom have any after-sales followup.

• *The project, a fixed-term contract with the firm*
This question of an after-sales followup in terms of career management is illustrated with the case of Alberto, who, for several years, passed from project to project in software development and between assignments with clients. After a downturn in the computer industry, the number of worthwhile projects dropped, and competition between colleagues rose. Everyone wanted to be in on the same projects. "The project heads ended up benefitting from this scarcity of projects. They were able to choose their team members. Being on a project was reassuring for everyone during this period of uncertainty. The question of what we would do next was left hanging. Our decision did not correspond to career plans. The intention was to preserve the basics: our jobs. Some employees chained projects like temporary employment contracts."
Alberto was referring in veiled terms to the internal labor market.

• *Prospects after the project affect solidarity during the project*
"I knew a project where the main topic of discussion at lunchtime, six months before its expiration, was to know who would go on to which future project. Among programers, I saw the mounting animosity between persons who were working together but had applied for the same position in the flagship project about to be started."
Alberto witnessed opportunistic behaviors:
"Ultimately, those who played the game were the losers. Bonuses were individualized; and once that started, it was contagious."

• *Solidarity beyond the project*
"I might now be in jeopardy if I had not had the chance to be on a few prominent projects. However good I might've been as a program analyst, what counted above all else was the projects I took part in and the contacts I made."
Involvement in projects helped develop personal networks and careers. The autonomy granted by a project made individuals responsible for their own future: "Don't count on support from other analysts. Everyone for himself on his project! Fortunately, I kept up good contacts with those who had directed previous projects. They appreciated me and, I hope, will continue thinking of me in the future."

Dual pathways for developing skills and qualifications

The example of how Alberto managed the period after a project raises broader questions about the acquisition of skills and qualifications, the value atta-

ched to them and career management. A project is normally seen as providing leverage for the development of new skills and qualifications of a relational, methodological or managerial sort. However the description of what actually happens presents a picture with contrasts. The accounts we collected point out the difficulty of proving, once people return to their normal jobs, that the qualifications acquired during a project are valuable. They also indicate how hard it is to synchronize a career with a succession of projects. A final point, companies are apparently not interested in handling the problems of "incompetence" in relation to a project.

• *The value of qualifications gained through a project*
A project provides an opportunity for experimenting and acquiring managerial skills and qualifications that, cutting across traditional job boundaries, are complementary to those related to one's specialty. Given these positive prospects, how to grant recognition to the persons for what they have learned once they come back from the project to their ordinary jobs? There are at least three reasons for these recurrent problems.
First of all, "soft" know-how very seldom fits squarely into the grid of job skills and classifications, as Claude's experience in a high-tech R&D project made him realize:
"Our specifications of skills, centered around specialties, did not allow for taking into account all the know-how I acquired on the project."
Secondly, individuals do not always have an easy time putting into words what they have learned on a project. When there is no methodology for personnel assessment and a followup by human resources, the person will have difficulty formalizing the new know-how, as Valerie testified about her experience after a multimedia communications project:
"I've become aware that I now know how to work in a team, evaluate risks and participate in group decisions, but that seems trite. And I don't know how to convince my boss I'm better in these areas."
Finally, new skills might simply not be deemed useful, and thus not valued in job specifications. Philip, who had taken part in a project for managing complicated insurance transactions, stated:
"Here, we provide expert legal advice. The fact that I know how to talk about a client's needs or raise a problem in different terms is not useful, and might even be dangerous. On the contrary, I'm criticized for not being up on the last piece of legislation. I have to catch up as fast as possible."

• *Synchronizing projects and a career*
The question of acquiring new skills and having them recognized brings up the broader problem of career management. In many firms, unfortunately, participation in a project is not sufficiently taken into

account when designing mid-run occupational itineraries. As a consequence, people pursue their personal interests and strategies, which might be harmful for the project and create social tensions with major consequences. Projects adds onto classical possibilities for a purely vertical advancement: "horizontal" career prospects open, as people move from one project to the next, or alternate between a project and their regular jobs. However this is not without risks, as Pierre, a human resource director in an international trading firm, told us:

"You can't replace ten years of experience in a specialty with ten experiences, each lasting a year, in projects. In terms of career management, a 'nook' as project head can soon become a 'jail'."

The risk is to pass from one project to the next, depending on the opportunities, but without ever fitting into the occupational grid recognized in the firm.

• *Project-related "incompetence"*

A project generates a new dynamics of socialization and exclusion. According to Marie, who worked in banking:

"It's always the same ones in our company who are on projects. Others never step forward."

New social stratifications separate those who are often asked to be on a project and those who are gradually excluded. As Bertrand NICOLAS (2000) has pointed out, when projects are valued in managerial talk and in the firm's practices, what is left unsaid is that less value will be attached to those who do not take part, as Anne, in the educational sector, confirmed:

"Me too, I'd like to be on a project. But the same ones are always chosen. I've ended up feeling I'll not have any more opportunities. But I know it's hard, and I'm not sure I'm capable of taking part!"

Rumors insidiously shape the reputations of "champions" or "dead weights". Anne added:

"Even though it's not written down anywhere, you clearly know who's indispensable and who you'd better avoid lugging along on a team."

Informal recruitment networks and parallel systems of management arise out of the processes whereby persons choose each other for a project. Of course, rumors circulate outside any formalized system of evaluation, beyond the scope of the department of human resources. This is, we might think, a healthy, natural way to manage personnel, since the least competent are eliminated and the best are promoted. The operation of a project breaks traditional forms of solidarity and individualizes behavior patterns. What happens to those who are not, or no longer, competent (although they used to be) or who need time to become competent? Pierre, who took part in a communications project:

"It's always hard to say you don't know how to do something. You slug it out, muddle issues, try to hide your problems in the group. In short, you got to

protect yourself, since leaving a project is not good for career prospects inside the firm."

According to EHRENBERG (2000), the principle of obeying rules and regulations has been replaced with constant references to individual initiatives, autonomy and the entrepreneur as a model. Accordingly, many wage-earners feel that they are "not up to it" on a project in comparison with situations outside a project where they only have to comply with regulations and follow routines.

CONCLUSION

This article presents the findings from an exploratory research that collected, with discretion in a setting outside the firm where they worked, testimonies from persons that would contain enough detail to ensure their veracity. The group dynamics in these "ad hoc communities of expression" freed tongues in a way that might not have occurred had the research been based on interviews and commissioned by a firm.

These accounts and our analysis of them bring to light the often cruel experiences of persons who took part in projects – in contrast with the enthusiastic talk and promising prospects that led them to become involved. Our intent has been to take the social effects and difficulties of project management as seriously as the project's actual activities, which capitalism values so highly. Given the variety of the projects, situations and positions, any generalization is open to discussion. Personal or occupational risks and opportunities crop up differently depending on whether the person heads a big strategic project or is a part-time member of a project for making local improvements.

Besides the proposals already formulated, the risks detected in this research should lead researchers and human resource practitioners to give thought to four subjects:

– *The isolation of individuals.* Jean-Daniel's efforts to rebuild his life, Agnes's doubts or Alberto's attempt to plan a career are all evidence of isolation. They were alone, left to themselves with no one to help them find their bearings and take stock of their experience. In this sense, the project was not a learning experience for them. They came out of their project feeling weaker or even guilty.

– *The loss to the organisation.* Beyond individuals, the whole organization is weakened. The isolation of individuals, when generalized, risks degrading the organization's potential. Jean-Daniel's project might have been a success, but the company lost a collaborator or, at least, his involvement and performance. In Agnes's case, the feeling of a lack of understanding – or even of an opposition between job and project – was reinforced. For Alberto, the firm as a whole will not progress if there is no sup-

ALAIN ASQUIN, GILLES GAREL AND THIERRY PICQ

port for individuals and if their career development is not taken into account.

– *Projects are double-edged.* Is a project a tool for the development of individuals, groups and organizations or, instead, a new form of exploitation and domination? The wielding of "soft" power and supple domination (COURPASSON 2000) combines with the positive, progressive aspects of a project to spur individuals to take part. However attention should be drawn to the fact that a project also bears risks for individuals, social groups and occupational identities.

– *The management of human resources.* By cutting across normal job boundaries, project management raises questions for the firm's human resource department, questions relating to its very existence (ZANNAD 1998). The normal assignments of human resource departments have developed within the framework of "occupations". The tools normally used are poorly adapted to a temporary population in operations that cut across traditional job boundaries. For example, how to define the duties of a project manager who does not have "duties" in the usual sense of the word but, instead, a general objective to reach? What becomes of job classifications when activities converge? Given that human resource practices are not adapted to project management, deeper questions crop up about the difficulties that human resource systems have in taking into account the increasing differentiation and segmentation of populations, situations and forms of organization. The trend toward "dual" organizations, which combine "projects" and "occupations", is a potential source of collective enrichment under condition that the transfers between these two poles be thought out and organized. Otherwise, contradictions might emerge, for example out of the overinvolvement or overexposure of those who participate in projects or owing to the exclusion and loss of esteem of those who do not take part.

The management of human resources in question

Becoming more competitive thanks to projects has a price tag: the organization must evolve to apprehend the new rationales that cut across traditional boundaries; and both "permanent" and temporary systems, such as classical departments and projects, must co-exist. As X. BARON (1999) stated, "Human resource management is questioned as to its capacity to give up a uniform managerial model for a variety of forms of management, adapted and evolving as a function of structures and issues." For example, the capacity for an organization to operate across normal boundaries depends on its human resources system's ability to follow up on, stimulate and value the personnel who take part in projects and have careers that deviate from the usual patterns.

Given these issues, can human resources remain a centralized function that handles contradictory demands from regular jobs and project-related activities? On the contrary, should it be decentralized, for example, by setting up human resource project managers? Changes in the human resource function bring us back to questions about the evolution of occupational identities as project management advances. A division of labor could be designed between a department of occupational human resources, which would try to preserve skills in recognized jobs and manage such careers, and a department of project human resources attached to project directors, which would have the task of managing the personnel involved in projects. In this way, the problem of occupational identities and of the solitude of participation in a project would be directly handled. The human resource function could adapt to the trend toward project management by "dissolving" itself in the processes related to a project and constructing a global multi-project coherence (GAREL 1998). In brief, casting light on the gloomy side of projects should lead human resources to inquire into its assignments and reinvent itself. ∎

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IN CHINA, BETWEEN *GUANXI* AND THE CELESTIAL BUREAUCRACY

OVERLOOKED

In analysing the reaction of the local workforce to the management style introduced by Lafarge in its cement division subsidiary in China, we came up against a general question that puzzles companies rooted in the West but with subsidiaries in that country. These firms seem to face a key dilemma: should they adapt themselves to "Chinese" management? Or should they – and can they – practise management in conformity with the orientations taken by the parent company? Or yet again, should they look to implement some sort of synthesis taking into account both Chinese and "Western" practises (with all the ambiguity implied by the latter)?

by **Philippe D'IRIBARNE**

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These questions particularly relate to the exercise of power, a domain which, for Westerners, is all but self-evident in the Chinese context. Is it possible to implement a management style, inspired by democratic values, which is characterised by both a certain balance of power and applying the same rules of the game for everyone? Or is this unthinkable, given the strong tradition of arbitrary power and submissive subordinates?

In an attempt to answer these questions, we will first examine what seems to be the hard core of Chinese cultural resistance: the exercise of power. Our starting-point will be a Western reading of what we encountered in the field – an admittedly one-sided perspective. We will eventually shed light on the situation by taking into consideration the deep Chinese fear of seeing the forthright assertion of opinions degenerate into destructive confrontation. This will enable us to better understand how the values of the Company could translate into concrete terms, and what this meant on a practical level (Box 1). Finally, we will seek to gain a deeper understanding of what we ob-served, linking our work to some teachings of the Chinese classics(1).

A CHINESE VIEW OF POWER

Many aspects of what we observed tend to reinforce the stereotypical representation of a China which is little open to democratic ideals, while other aspects lead us to question such a fixed image. This induced us to explore the relationships between managers and subordinates from a Chinese perspective – such a perspective implies paying close attention to the inherent risks of forthright expressions of antagonistic points of view.

(1) One of the problems encountered by management of the subsidiary, and which remains challenging in the more recently acquired Business Units, is not at all specifically Chinese. At issue is the way in which state-run companies were generally run in the Chinese socialist economy. The same features were found in Eastern European companies. This, as Bertrand Collomb –CEO of the Group at the time our study was carried out– pointed out, when Lafarge set up in China: "the first task of the team of expatriates was to establish work and performance expectations in a factory where a hugely overstaffed workforce, with more than twenty levels of hierarchy, had developed lethargic habits. Removing the "resting cots" from the offices was one of the symbols of this "disciplinary" action". (Bertrand Collomb, "Entreprise internationale et diversités culturelles" [International Business and Cultural Diversities], *La Jaune et la Rouge*, April 2007). The management of this transitional phase will not be dealt with in the present text.

A kind of authority one can barely think of challenging

In comparing the Chinese version of the Lafarge Group's Principles of Action with the French and American versions (the latter of which served as the model for the Chinese translation), one notices that the Chinese version reflects a very directive conception of authority. Consider the following statements:
– French: "Les Branches […] ont un rôle critique à jouer pour **entraîner** les Unités vers une performance accrue."
– American: "Divisions […] have a key role in **challenging** the Business Units to achieve greater performance ambitions."
– Chinese: "Divisions […] have an important role to play in **setting** performance programmes for each Business Unit."
French and American subordinates have wide room to manoeuvre, with their respective managements being only responsible for "leading" or "challenging." From the Chinese perspective, however, managers must "set programmes," thereby structuring and supervising subordinates' actions much more closely.

This way of proceeding was deemed necessary for the parties involved, so that everyone knew what to do. The interviewees' remarks were expressed in terms of "knowing where we're going," "reference points," "the direction" to take. In the words of a manager, "If we don't have an excellent long-term orientation for our Group, personal objectives are very vague." "With objectives," states an operator, "we know clearly where we're going. I can make them part of my personal objectives; the general objectives are reference points for all of us."

This need for reference points, or landmarks, makes it seem self-evident that the orientations set by the company must be followed: "Since we're in this Group, we have to understand and accept its culture," says an operator. "Rigidly" respecting the instructions given seems to be seen as appropriate behaviour.

 A key aspect of this uncompromising nature of authority is that it seems quite unthinkable to contest it openly. "One may question, of course, but… instructions come from up above, I can't challenge them," answers a worker when asked what he can do if he does not agree. Clearly, in principle, the "Lafarge culture" has changed things. Thus, an operator affirms: "Subordinates can contest in a straightforward manner; that's one of the big diffe-rences be-tween Lafarge and state-run companies." But our interlocutors did not hide the fact that it was little more than a theoretical change (which, due to the respect owed to authority, probably had to be celebrated) with little concrete impact. In res-ponse to the question "Can one question one's superior?" an operator first replied "Yes," then lau-ghed and answered the question "Does this ever

A STUDY

The cement division subsidiary of Lafarge in China is made up of a number of units with widely varying histories. Our study, in 2007, took place in three of them. The first, Chinefarge, located in the area around Peking and previously a state-run company, joined the Lafarge Group in 1994. With some ini-tial difficulties and after a long process, profound transformations were gradually made in both tech-nical operations and management. The second site, in Sichuan, in Dujiangyan, was built from scratch, based on the model of Lafarge sites in the most advanced countries. The third, with headquarters in Chongqing and two factories in the areas of Nanshan and Guang'an, is a more recent acquisi-tion and one whose "Lafargisation" has been carried out to a much lesser extent. At the time of our study, its management was very wary, defending the merits of what they described as "Chinese" methods of management.
The workforce of the subsidiary is almost entirely Chinese. At the time our study took place, the managing director was French, but the heads of the three Business Units involved, as well as nearly all those holding positions of responsibility, were Chinese.
Forty-six interviews were conducted across different levels of the hierarchy, most of them in Chinese with French translation (with the help of Mingming Duan); about ten took place in English or French.

Box 1

happen?" with "I've never seen it." Similarly, a human resources manager affirms, "If someone doesn't agree, he can speak to n+1 or to human resources. We can move to the next level in the hie-rarchy." But the same person contin-ues: "It's very rare; I've never heard of this happen-ing." Within one of the factories, the production manager states that "there are ways to point out inad-equate beha-viour of management to superiors higher up the chain of command," but the human resources manager adds: "Disagreements can be reported to management on a higher level; it's very rare."
We witnessed a clear example of just how unlikely such a challenge to authority really is in discussing the role of the Company's Principles of Action. When the director of one factory, who, it turned out, appeared to be a rather critical judge, was asked if, based on these Principles, he could confront management in case he felt these principles were being transgressed, he answered sharply: "No, no, no, I can't," as if we were raising an extravagant question.
Nonetheless, evolution on this level is probably not

PHILIPPE D'IRIBARNE

This system takes on meaning with regard to traditional expectations about the fair, sustaining power exercised by the celestial bureaucracy. (*Trois enseignements*, painting on silk, Ming Dynasty, 1368-1644, Guimet Museum, Paris)

impossible. A woman manager tells how when she first joined the Company, she saw the managing director of the subsidiary as THE representative of Lafarge, embodying the Company image and values in an almost sacred manner. Consequently, no objection could possibly be made to anything once her superior had expressed his opinion. She could not understand how the French could see things differently. But from that point on, she explains, she gradually came to understand that a refusal on the part of her superior to accept her suggestions did not necessarily mean an automatic end to discussion, but could actually encourage further reflection. This manager's perspective thus changed, evolving from an interpretation focusing on respecting authority to one inspired by the lessons which might be learned from a given situation. Such an example, however, was definitely an exception to the rule, and should be seen as one case of the impact of particularly strong Western influence.

The weight of such authority is matched by the severity of sanctions whose level seems to be self-evident. As an example, it was only through an expatriate who firmly stated that "safety is dealt with in a disciplinary, punitive way" that we were able to observe serious criticism of such severity. Some of our interlocutors, especially in the units recently acquired by Lafarge, were very sceptical about any notion of evolution in this area. The director of one factory thus commented, "We tried using persuasion on questions of safety, but when this failed, we then turned to sanctions."

The weight of authority is also seen at the same time on a more symbolic level. A manager who had just been explaining to us his deep level of concern for the personnel proceeded to pass by a guard standing at military-style attention, making no sign of recognition, as if the guard were merely part of the scenery.

From these few facts, the conclusion seems clear, and in conformity with the widespread view of China that is held in the West: in spite of the country's modernisation, an autocratic conception of power prevails. This perception dovetails with that, on a country-wide scale, of a very hesitant transition to democracy and the thorny questions of human rights. Montesquieu's words come to mind that "China is [...] a despotic State, whose governing principle is fear(2)."

The duties of authority

If several elements thus reinforce the stereotypical representation of the relationship to power as oriental despotism, others cloud the picture. They suggest that the relationship to authority is far from being based solely on arbitrariness, and that, in China as elsewhere, duties and limits are also part of the game.

If it is indeed difficult for subordinates to disagree with superiors, or even to assert themselves too forthrightly, ways to do so do still exist. The possibility open to everyone to express personal wishes, without putting him/herself in the spotlight, was raised in light of the role played in the Company. A young woman manager thus developed a way of expressing her wish to have greater responsibilities (Box 2).

(2) MONTESQUIEU, *L'Esprit des Lois* [The Spirit of Laws], Première partie [First part], Livre [Book] VIII, ch. 21.

Clearly, "directly stating", even if only a "de-sire" for a higher-level post, let alone mentioning the will to obtain it, is simply not done. But if one is content with merely "making it known", being careful to speak in terms of "doing more difficult things", "taking on more responsibilities", "working more", "doing more", the hierarchy "understands". Moreover, management can "consult" the person involved. An operator expresses a similar attitude: "Of course everyone wants to work at the oven. For our yearly assessment, we are consulted on our objectives for the following year; of course I say 'I wish'. But at the same time, I take training courses, so that my greater competency will be noted by the manager, and he can see if I'm making progress, if I'm learning the techniques necessary to use the oven". There again, the superior "consults", and can "notice" and "see" what is reflected by the subordinate's behaviour: "I'm taking training courses", "I'm learning". The operator comments: "It's a two-way dialogue"; "it's a meeting between us"; subordinates, then, in their own way, do have their say.

MAKING ONE'S WISHES KNOWN

A supervisor in human resources comments at length: "If very few mistakes are made, the hierarchy may think that I am capable of doing more; therefore I was given greater responsibilities, […] thus, little by little, I am taking over other jobs […]. So of course I made it known that I was ready to take on more responsibilities, to do even more difficult things. My former manager knew this, of course; when my new manager took over, perhaps they communicated; the new manager came to see me to consult with me on this. Saying directly that I wanted that post, that particular post, really seems aggressive. The Chinese try to get the message across in a subtle way. I would simply like to take on more responsibility. I want to because I'm young, I'm full of enthusiasm, I'd like to work more. Right away, the hierarchy understands that I'm ready to do more."

Box 2

If a superior wants to mobilise the staff, or even simply avoid people leaving the Company, which happens easily enough, s/he is wise to understand what has thus been suggested. The clear-cut affirmation of authority, most welcome in an American context, is much less so in China. This is reflected in the Chinese version of the Principles of Action where "we wish", "we ask" replace "we want" in the American version: "**We want** all our employees to be key players in the

formulation of their own personal objectives." / "**We wish** our employees to play a determining role in formulating personal objectives." "**We want** continuous performance improvement to be a day-to-day priority for each person of our Group" / "**We ask** each employee, as a daily priority, to continuously strive to improve performance."

Moreover, if it is very difficult to contest one's superior, the latter can take the initiative to engage in self-criticism to improve his/her own performance. A supervisor in human resources observes: "I had an interview with one of my subordinates, doing an assessment with him. I said that I was not doing enough as regards training; this year I will do better." In any case, the superior cannot limit him/herself to top-down management alone. S/he must also set the example, or otherwise risk being barely followed: "Managing by example is not the Lafarge way, we have been brought up this way;" "If you say things to people and then don't do it… this is the Chinese classics culture," report various managers. Many claimed as self-evident that superiors cannot ask their subordinates to do what they themselves do not do. "If the leaders don't respect the rule, it's impossible for others to do so," says a maintenance worker. "If I don't do overtime, I can't ask others to do it," echoes a finance manager. And in the words of a human resources manager, "If the leaders don't implement the culture of performance, how might the others do this?"

For many, the fact of setting an example implies sharing, in a significant way, the working conditions of those for whom the example is given. As a maintenance worker specifies, it means "being with the subordinates". A production manager responds to the question "What does managing by example mean?" by showing his stained uniform and commenting, "You see?" Several employees spoke of the manager who does not hesitate to mix in with the workers on unpleasant jobs, particularly dirty work or low-level tasks: "turning a screwdriver, like the workers", states an operator. "It's a message of solidarity with them, a good example", suggests a manager; "Working on the assembly line is very difficult; if I work with them, I can mobilise energies to the maximum; I manage to get extraordinary results."

The fear of conflicts sparked by strong self-assertiveness

The restraint expected from a subordinate, as, in certain respects, from a superior, is part of a vision of society where putting oneself forthrightly forward is not really accepted for fear of sparking off head-on clashes which may degenerate into destructive confrontation.

We find evidence of the concern with avoiding such opposition in the Chinese version of the "Principles of

Action", as compared once again with the American text, in specifying expectations for company personnel: "Constructively **challenge and be challenged**" / *"***Accept and propose** different **ideas** in a constructive spirit." There is no longer any question of challenge, with its loaded dimension of inter-personal confrontation. Relations remain more neutral, where people simply "propose" and "accept" ideas. Our interlocutors, across the board, highlighted this way of seeing things: "In Chinese culture one of the strong points is to avoid conflict", says a human resources manager. A production manager: "We avoid argument; people discuss before. Everyone must agree with the decision."

The importance of well-oiled, smooth-flowing inter-personal relations was evident even in carrying out the present study. Our interpreter shared his perplexity facing questions which he feared would disrupt harmony with the person being interviewed, and told us that he had slightly transformed them in translating, to avoid making a bad impression. One of our questions put to a manager, evoking what we considered a contestable way of proceeding (the case, previously cited, of the manager who ignored the security guard saluting him), prompted a reaction stressing the importance of positive examples, "Say what must be done, do not criticise others."

Generally speaking, it is ill considered to put oneself forward too openly. Thus, in the words of an operator referring to those who leave the Company for more favourable offers elsewhere: "When people leave, we don't speak about it; it's taboo and happens behind the scenes. If we really have very good relations, I'll tell you I'm leaving. If someone asks me 'You've found an interesting job, a good salary?', I'll reply: 'No'; I won't explain in detail." The interpreter agreed that saying: "I'm leaving because I have a better job than you, I'm more competent" is not done; it would make others lose face. People would say instead: "I've got problems, I can't stand it, I'm not competent." Moreover, putting oneself in the spotlight means taking a risk: "You lose face if you leave and then don't succeed, if you have to come back when you said you were going to succeed."

Hierarchical relations, as for the rest of life in China, take their meaning in a representation of life where overly explicit self-affirmation is seen as threatening. The remarks cited above (Box 2) may serve as an example: "Saying directly that I want that post, that particular post, really seems aggressive." Where, in a Western perspective, it is expected that each person clearly express his/her desires, diplomacy is *de rigueur*: "to make known" rather than to clearly assert, and to suggest that it is a matter of "working more" of "doing more" and not of putting oneself forward. This restraint and more generally the absence of openly challenging authority must be interpreted as pertaining to harmony rather than being a sign of submission, or even, as Westerners tend to immediately interpret, of voluntary servitude.

The virtues of understanding messages only partially spelled out apply not only to subordinates, but to superiors as well. In the words of a human resources manager, "In Chinese culture, subordinates obey orders perfectly well; sometimes it's not even necessary to specify what managers want. We only need to slightly mention and subordinates understand."

This diplomacy is seen in situations where, without obeying, employees formally submit. A manager gave the example of the way in which she herself handled a difficult situation. Writing to the local authorities, she ended her letter with a form of address expressed as a request for help; it was impossible to do otherwise without transgressing the code of etiquette. Her superior, however, an expatriate, interpreted the formula in a literal sense and refused to approve the submissive attitude shown by the subordinate. A lack of respect toward either of the two figures of authority seemed unthinkable to the manager. The solution was to keep the litigious formula in the Chinese version, which was sent off as such, and to delete it from the English version sent to the superior. Thus, harmony could be maintained between the different parties involved.

Moreover, if one engages in self-criticism with the aim of self-improvement, one can, at the same time, criticise others, since one is no longer in the position of asserting oneself. As a manager states, "The Chinese language has a word, to criticise oneself, to criticise others, also to look at oneself." The emphasis turns away from the relation between the one who criticises and the one who is criticised to focus on the situation and the actions that can be undertaken to improve. The line between the two, however, can be a fine one. Thus, the negative reaction seen earlier, provoked by the question put to a manager implying criticism of a certain way of doing things had some effect on a different level. The following day, the manager in question spontaneously came to thank us, outside of our appointment schedule, for the "feed-back" that we had provided and the conclusions which could thus be drawn.

When it is up to authority to consult and to hear what is merely suggested, without the subordinate having to put him/herself forward or to contest, it is possible to avoid the danger of confronting antagonistic points of view. Moreover, the very manner of "consulting" is influenced by this form of caution. Our interpreter explained having used this word to translate a Chinese term implying merely the wish to know what the person being "consulted" is thinking, exclusive of any exchange of opinions.

A FAIR AND NURTURING ORDER

Whereas the influence of a foreign group is not one which can revolutionise the framework in which hierarchical relationships take on meaning, widely

varying practices of authority are nonetheless compatible with these same frameworks. If those who hold authority are seen as having duties toward the people they are responsible for, no fatality, in China as elsewhere, makes it necessary for superiors to remain loyal to their duties. Most likely, as everywhere else, practices differ widely. Lafarge's influence was to encourage these practices to evolve, within the Chinese framework of possible solutions, in keeping with the Group's values of respecting and caring for employees. This evolution made its mark on the style of hierarchical relationships. And it affected, in an even more radical way, the manner in which the company and its directors were concerned about the lot of the personnel. On these various points, our interlocutors reported a significant break from what they had experienced earlier in other companies or in state-run companies now belonging to the Group.

Consulting and setting examples

The influence of the Group made everyday hierarchical relations evolve on all levels, including that of operators. Measures were taken to enable subordinates to speak out.

According to a human resources manager, while "in the past we didn't consult with employees", the practice now is to ask for people's opinions before changing their jobs. An operator suggests that this is not merely official discourse: "The posts we need are advertised; if I'm interested, I'll write a cover letter. We sit competitive recruitment exams, interviews, like people who come from the outside (laughter)." The recourse to dialogue between superiors and subordinates was mentioned during the interviews (especially by those speaking in English(3), in talking about setting objectives for subordinates.

At the same time, a suggestion system was developed. "Yes, there are channels to get the message through, the direct unit head and the upper echelons. We are assessed for that, we get extra points, 5% of the total; if five proposals are adopted, we earn a top score", states an operator. "We organise meetings to gather proposals, there are rewards for those judged positively. It's first discussed on a lower level", affirms a production manager, who nevertheless adds, smiling, "we only propose."

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(3) The question can be raised as to the origin of the nuances between what people say through English or through Chinese. One explanation may be that the former were marked more by Western references than the latter. A second reason, not distinct from the first, is the fact that speaking in English tends to result in people adopting official company discourse, whereas speaking in Chinese leads to greater distance from it (A.-W. HARZING, "The Interaction between Language and Culture: a Test of the Cultural Accommodation Hypothesis in Seven Countries", *Language and Intercultural Communication*, Vol. 2:2, pp. 120-139).

A change also took place in the way in which superiors set examples. For instance, an operator explains: "The manager participated in a very dirty operation, he does even the difficult jobs alongside the workers; this shows that the principle of managing by example is respected. In the past, the directors only ordered people about (laughter)."

A way out of a world lacking order

At the heart of the transformations which took place lies the way in which the Company and its directors were concerned about what becomes of the personnel. As seen through the experiences recounted, everyday life in Chinese companies, be they public or private, seems to be marked primarily by short-term considerations, influential networks of reciprocal interests, a low level of attention paid to personnel, particularly as regards training and prospects. It was largely in contrast to this world that the Lafarge way of operating became meaningful.

"In state-run companies, performance is not important; what counts is the relationship with your superior, or with important people. [...] In my department", a manager declares, "*guanxi* was more important than the actual performance". The role of relations maintained in this way with those in power, as opposed to the quality of any individual contribution to company operations, was strongly underscored by our interlocutors in their descriptions of the everyday running of Chinese companies. "Before, in state-run companies, personal relations made things happen, not competence, and only a minority benefited". says an operator. This manner of operating is supported by the vagueness in allocating responsibilities and the lack of rigour in assessing results. A supervisor explains: "In the past there was no job description; we didn't even know the requirements of such or such a post. We didn't know if we were really competent, since promotion took place in an authoritarian manner." "In private companies, there's no system of assessment which makes it possible to measure things in a truly objective manner," continues a supervisor.

Such a universe, with so few standards, is strongly characterised by the reign of self-interest. "Before, personal relations in state-run companies were very complicated; people only sought personal interest, and did not bother much with others," recounts a supervisor. An operator adds, "In state-run companies, sometimes people don't hesitate to distort figures to meet the personal objectives of management." "Private companies only look for results; sometimes people don't care about the means to this end; morally, it's not acceptable," further claims an operator.

From favouritism to equality for all before the rules

Unlike the "ordinary" business world, Lafarge appears to be governed by standards which are both clear and respected. Both the existence of strict procedures and their implementation have made possible a level of objectivity which is consistently opposed to *guanxi*, a vector of favouritism. In the words of a manager, "Everything takes place according to specific, carefully developed procedures […]. At Lafarge, performance plays a decisive role in determining salaries, […] which we very much appreciate." An operator adds, "Here, everything is really authentic, figures closely reflect reality." "It's clear for everyone what concrete measures need to be taken to reach objectives; everyone tends to their own posts."

This attention to performance is a source of pressure which was largely unknown in state-run companies, but one which, on the whole, seems to be well accepted. As one manager put it, "Before, there was little pressure, few indicators to measure productivity; an operator could stay in his cabin without checking if the conveyor belt was moving coal. With precise indicators in place, his productivity is more motivated." An operator says, "Of course the pressure is real, but it's positive pressure which gives reasons to work; in the state-run companies everyone worked as they wanted." Another operator adds, "Compared to state-run companies, Lafarge demands that everyone do the maximum; it's the result which counts. Most of us easily accept the pressure, only a minority don't. It's a question of time."

Our interlocutors contrasted what they described as "management by men" – the reign of arbitrary personal decisions and favouritism tied to networks of relations – to "management by a system" – strict respect of a set of rules: "For me, it's the standards, the rules, which make Lafarge work, not individuals." Far from being seen as a source of dehumanising bureaucratic impersonality, this formalisation was perceived, as a vector for greater humanity: "If an assessment system is not objective, people can be judged in a totally random, subjective manner; myself, I find that inhuman. The objectivity of an assessment system is one of the key ingredients in humane management", says a supervisor. An operator adds, in the same vein: "Before, promotions and personal development were very dependent on personal relations; Lafarge gives priority to the individual!"

This way of operating can also be linked to a change in the foundations on which trust is built. One manager strongly insisted on the difference between "trust", personal confidence based on a logic of relationships, and "confidence", more closely linked to a professional logic of competence.

To what extent does objectivity, valued as such, actually influence day-to-day governance? A question concerning the persistence of a level of favouritism

drew a laugh from an operator, followed by his reply: "There is some, but I've never heard of this kind of thing; the Chinese hesitate to describe their feelings to their entourage." But judging from all the observations made to us, it seems difficult to doubt that we have indeed moved out of the world of the most ordinary Chinese businesses.

Helping everyone in their personal development

The place given to personal development for all employees has been particularly appreciated. An operator comments, "I learned [from the "Principles of Action"] that the development of a company depends on the personal development of its employees." "Lafarge attaches great importance to personal development; the atmosphere is favourable to promotion, to taking initiatives."

For Lafarge, helping every employee progress is critical. A supervisor comments: "Most important: management attaches great importance to humaneness and is closer to people, to each employee; helps employees to succeed. This particularly struck me." The demands to meet performance outcomes are part of a global perspective which includes this employee support. For one woman manager, objectives must be "difficult but not overly so", in the perspective of "self-improvement" and, for those with difficulties, "offer greater encouragement". An operator states that "Lafarge plays the persuasion card, encouraging people. In the past we spoke of systematically excluding the weakest people; that's no longer the case now. We are encouraged to progress without worrying about it; the fact that someone is less good – a B or C – doesn't mean that they work badly, but simply that others work better."

The question of training was particularly highlighted. In the words of an operator, "Personal development – Lafarge provides many training programmes, offers support in case of need." Lafarge, unlike traditional Chinese companies, does not reserve training programmes for senior employees, a reflection of the confidence it places in recently hired employees.

The Company's safety policies, the target of major efforts(4), are seen in this perspective. As a manager put it, "When someone is the victim of an accident, it means great suffering for the person but also for the family; we don't want that." The manager adds: "this strongly conveys humaneness". These policies come across as the privileged translations of the directive "placing people at the heart of policies", as a manager says. In the past, the reaction to accidents was charac-

(4) The arrival of the Group was marked by a spectacular change on this front. In the first factory acquired, for example, the number of hours lost due to accidents was cut twentyfold in the space of three years.

terised by a logic of group connivance: "Before, regardless of the nature of the accident, we did not look for the reason why; we had to show great solidarity," notes a supervisor. He explains that the mindset has moved on to a logic of orderly operations, respecting the rules and seeking progress: "We are now ashamed of accidents; we must discover both the immediate and underlying causes. Before, this was ill considered; now, we accept what happens."

A long-term perspective

A reference to the long term, absent from the American version, was added to the Chinese version of the "Principles of Action": "Focusing on performance improvement" / "Giving priority to **sustainable** performance improvement". "Increasing share of the fast-growing markets" / "**Sustainably** increasing the share of the fast-growing markets". Personal development ties into this perspective of duration: "If the Company has no future, I'm not going to work here; my personal development is linked to the future of the Company," says one operator. Conversely, the head of a production department explained at length an episode where a group of operators left the Company: "They said at the time, in 2004, that they couldn't see much future; now that Lafarge is moving forward much faster, some have returned."

This notion can be keyed to various expressions of contradiction in the minds of our interlocutors, between, on the one hand, a way of functioning opportunistically geared to seeking short-term gains and, on the other hand, building a collective order which serves as the basis for long-term success.

Complex adaptations which take time

If the way of functioning being put into place generally pleases most people, some, nonetheless, are not on board. Among the directors we met, some accused management's new formalisation of being responsible for slowing down decision-making in areas where speed is essential. This opinion was put forward particularly as regards the growth of the subsidiary (notably in buyouts), and more generally in handling relations with clients and with the authorities. In these situations, those who manage by instinct appear to be more in tune with the way society works, and thus more efficient than their counterparts who must work by a system of rules. According to the head of one factory, if we want to develop company activity, "two key words, speed and size; we're too slow; we're choking on figures,

losing many opportunities, the Lafarge management is very rigid; there are many initiatives we can't foresee; we restrain local Business Units' initiative; we have to get rid of useless, bureaucratic tasks; for me the key indicator is profit; if there are too many indicators, we're lost, we can no longer grasp the essentials; I need much more autonomy, otherwise it's not worth it for me to stay." The president of a Business Unit (BU) contrasted Westerners, who manage by formal institutions, with the Chinese, who manage through human beings. He maintained that if management by institutions reduces the risk factor linked to the personality of managers, it also restrains their initiative and, if they are competent, keeps them from contributing to company progress. In the Chinese approach, he adds, power is concentrated around the managers.

On a more modest level, trustful personal relations remain very important. As an operator explains: "With people I don't know well, it takes more time to know how to communicate and exchange; among those of us who work around the oven, communication makes the job a lot easier. We spend a lot of time discussing everyday problems, we share our experience. For the same problem there are many different analyses; maybe some people have found solutions on Internet or elsewhere, in manuals. We take every opportunity to discuss, to play cards as well; we set up get-togethers."

Lafarge is also a sort of "in-between space" as regards relations with clients. Questioned on the difficulties possibly arising from the introduction of the code of ethics into traditional business practices, our interlocutors called attention to the existence of several markets, more or less "clean". Even in cases where corruption is no longer acceptable, good customer relations, with the degree of flexibility they occasionally require, continue to play a key role. In the words of a sales manager(5), "Some things are negotiable in a contract: prices, terms of payment; unwritten things."

In the end, fighting against the excesses of a logic of relationships without losing the positive aspects remains a delicate question for Company management.

Furthermore, problems also arise from the association of a vision of the Company as prominent and nurturing and the traditional functioning of the

(5) In relations between Chinese companies, contracts are often little respected, and justice rarely offers reparation. Consequently, a contract between companies is generally seen as only one episode in a business relation where claims and debts balance out over time. The difference between what is set out in a contract and what actually happens as regards deadlines, quality or payment is to be interpreted in this perspective. The fact of reaching agreement on a specific contract enables the parties to know who is indebted to whom and for how much. This type of functioning reposes on long-term relationships. Mingming DUAN, *Incomplétude des contrats et relations inter-firmes dans une économie en transition : le cas de la Chine* , Doctoral dissertation, Université Paris X Nanterre, 2007.

labour market. To what extent can benevolent management, helping employees to progress, pit its own employees against those coming from outside the Company? Even when the logic of the labour market is not openly criticised, it is seen as something one must submit to rather than as a legitimate force in its own right. Thus, in rather disillusioned terms, a production manager speaks of operators who left the Company to later return, sometimes at higher-level positions than his own: "They skipped several levels; it's normal. It's the market playing its role of adjustment." From their perspective, as the president of a Business Unit sees it, operators complain about the pay scale, making reference to a logic other than that of the marketplace. "In the survey carried out after the LFT(6), I remember one finding: 'if we truly worked for Lafarge, we'd have better salaries. Lafarge is rich'; they're not thinking of the marketplace."

THE POTENTIALITIES OF A CULTURE

The reactions sparked by the management style that Lafarge has endeavoured to introduce, the resistance encountered and the victories won, are all linked to the way in which targeted changes have become meaningful in a Chinese universe.

The expectations of power

The distinction between good power and bad power is a strong feature of Chinese culture. But what characterises a good power, and even more, what is important to avoid corruption and abuse of power, is not a carbon copy of what seems to be the rule in this domain in Western countries.

The Greek experience of polis(7) provided roots for certain conceptions prevailing in the West; among them: the vision of the virtues of debate and of a well-argued confrontation of points of view which allow for light to spring forth from the clash of antagonistic ideas, and the agonistic, or combative, conception of the search for truth associated with such a vision. This Western heritage explains, in particular, the meaning of opposing autocra-

tic to democratic power. A one-sided political regime lacking a watchdog opposition is seen as despotic.

Today's China has inherited a different history and another vision of the world. The opposition between a good power and a bad one has been built on different bases(8). There is no "tradition of public debate arguing for and against, logos against logos"(9). Fear prevails that a power which is too weak, a wavering rule, opens the door to disorder, with the threat of social collapse into anarchy. The Western conception of the autonomy of the governed is disquieting. Respecting the rules is thus seen as something necessary to impose, all the more strictly so since such respect is far from self-evident, given the strong individualism of everyday relationships.

The opposition between good and bad power has also been portrayed by scholars(10) as lying at the heart of Chinese history. The representation of good power is inspired by the image of the good leader, devoted to the good of the people and standing as a model of virtue, as Confucius described(11). "Assure the people of what they are entitled to […] this is what can be called wisdom" (6.22). The leader exercising power in this spirit is selfless and does not abuse his authority: "A gentleman *(junzi)* […] has volition, but not covetousness. […] He has authority, but is not tyrannical". (20.2). He sets the example of upright conduct: "He who observes rectitude, what difficulty would he have in governing? He who does not know how to govern himself, how could he govern others?" (13.3). Thus, the great mythical sovereigns from early times are seen as having lived solely for the good of the people, with no selfish thoughts(12). On the contrary, the bad sovereigns are shown to have been driven by a mix of cruelty and pride, forgetful of Virtue – which conforms to the natural Order(13); the tyranny that they exercise is depicted as leading to anarchy(14). Obviously, the Chinese are not Confucians, if the term is taken to mean that day-to-day behaviour is inspired by the Master's teachings; cultural context, in any case, has no magic effect on behaviour. But Confucius' teachings have contributed to building the interpretive framework which the Chinese use to convey meaning to everyday life and judge their fellow men. His teachings also reflect a general vision of the world which has influenced them and permeates the history of the country.

(6) Leader for Tomorrow, the name of the management renovation programme of the Company.

(7) Jean-Pierre VERNANT, *Les Origines de la pensée grecque*, Paris, PUF, 1962.

(8) François JULLIEN, Thierry MARCHAISSE, *Penser d'un dehors (la Chine). Entretiens d'Extrême-Occiden*t, Paris, Éditions du Seuil, 2000.
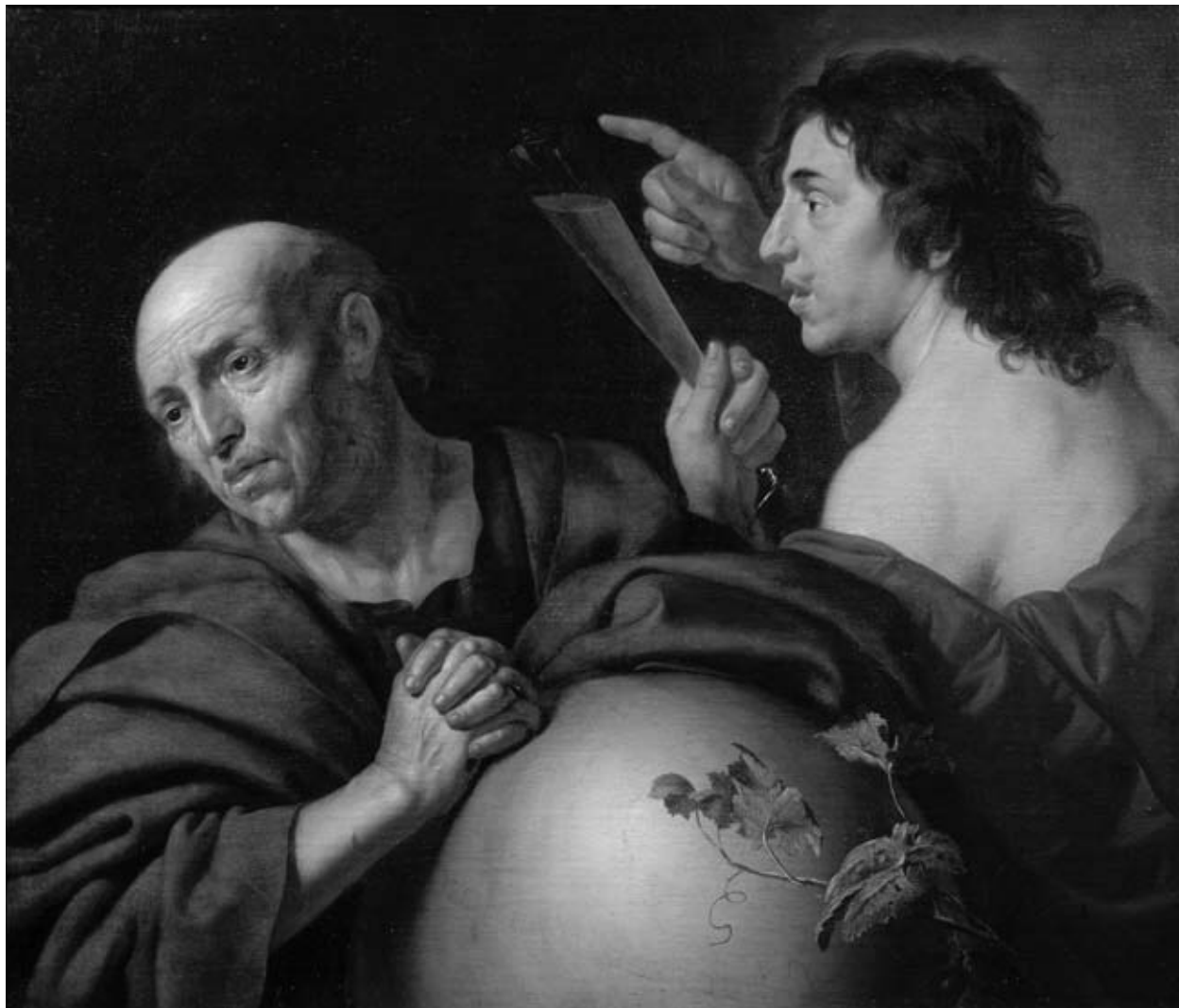
(9) *Ibid.*, p. 164.

(10) Marcel GRANET, *La Civilisation chinoise* (1929), Paris, Albin Michel, 1994.

(11) See *Les Entretiens* in the translation by RYCKMANS, Paris, Gallimard, 1987.

(12) Marcel GRANET, *op. cit.*, p. 23

(13) *Ibid.*, pp. 26, 45.

(14) *Ibid*, p. 53. .

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There is no tradition in China of a debate based on arguments pro and con. (*Héraclitus and Democritus,* **painting by Jan Van Bijlert [1597 – 1671], Museum of Utrecht).**

When the person in power does not make harmony reign, he loses his legitimacy; in the traditional Chinese perspective, he has lost the celestial mandate and must be replaced. But this is quite different from openly contesting respected power. Indeed, Chinese tradition has no lack of representations which can lend meaning to practices sharply contrasting with passive respect for authority. Some of the latter, such as the image of the scholar who enlightens the emperor, if need be by opposing him, were used in training the personnel in the "Principles of Action". Dealing with such subjects, however, takes one onto delicate terrain.

The Chinese classics illustrate the quandary that this very question gives rise to. In Confucius' writings, the image of reference is that of a perfect order where there is no place for any form of contestation: "When the world runs smoothly, the people do not argue" (26.2). Clearly, such an exercise of power is not without risk, since the absence of contestation may result from a lack of opponents,

when in fact this very situation should give rise to opposition. Confucius is aware of this: "There is the saying: The whole pleasure of being king is never being contradicted. Not being contradicted when one is in the right is all the better; but if one is wrong and there is no opposition, it may be that one lone maxim would suffice to destroy the State" (13.15). The survival of the State demands that people be able to express themselves openly before the sovereign: "Zilu asked how one must serve the sovereign. The Master replied: 'Hide nothing from him, at the risk of opposing him'" (14.22). But this revelation of what is true, a necessity for the public good, is delicate to initiate, for unless close connections have been woven between he who exercises power and he who criticises, the latter's actions may well be seen not as salutary advice, but as a lack of respect; "Zixia says: '[…] A gentleman first assures a reign of trust, and then he may criticise his sovereign. Without this confidence, the latter might feel insulted'" (19.10).

Eluding the logic of *guanxi*

Chinese society functions according to a logic of solidarity networks among private interests *(guanxi).* Maintaining order traditionally falls upon a strong political power carried out by a vast administration acting in the name of the "Son of Heaven" (the "celestial bureaucracy")(15). It is the duty of this administration to tend to the lot of the people. The expectations that the Chinese personnel have of Lafarge, just as the way its principles of management are understood, are influenced by this coexistence. This is exactly what underlies the opposition between being "managed by men" and being "managed by a system."

The state-run companies in the past operated largely according to a logic of networks, just as do privately-run companies now. Lafarge is seen, on the contrary, as exercising a strong, fair and nurturing power over its personnel, which corresponds to the ideal image of the "celestial bureaucracy." The role of competence, meeting point of justice (judging according to competence) and nurturing nature (developing competence), and the importance of security, seen not only as protecting individuals but also their families, fit perfectly well into this picture. The same can be said for a long-term perspective. If a "system" can be seen as giving more place to "humaneness", as being "closer to people, to each employee" than men themselves, as putting "people at the heart of policies", whereas men do not, it is because traditionally, only public authority, when it upholds its mission, is supposed to act in this perspective.

When the way of exercising power changes in such a manner, people remain just as attached to their own interests as when networks of interest and friendship prevail. They expect the authorities to play a major role in what people individually derive from their work. If they appreciate the change which has taken place, it is because they have the feeling of being better off than when everyone must protect their own interests alone, in a more anarchical world.

In the end, the change which took place in the exercise of power, with the importance attached to setting examples, to listening to subordinates and being concerned with their personal developments, allowed Lafarge to clearly distance itself from the most common practices in Chinese companies. This reform was able to take place while still respecting the Chinese cultural framework, accommodating the traditional Chinese image of a good power dedicated to the lot of the people. However, this in no way means that such an image has always inspired Chinese governance. But it is present in the collective imagination, with the people ready to favourably interpret practices which conform to the model proposed. Changing from a disorderly way of functioning, where each person's defence of his/her own interests is only limited by the existence of networks of contact and friendship, to an orderly way of operating provided by a fair, strong and nurturing power resting on a "system" based on strict rules, does not imply introducing a foreign conception of the role of power into Chinese society. It is clear that implementing this conception in the corporate sphere is not self-evident, given the extent to which it differs from the practices more commonly found in Chinese business; the merits of Lafarge in this successful transfer must not be underestimated. But this is not a case of a major cultural blockage. On the other hand, the possibility of freely contesting authority is foreign to the Chinese world, and on this level, the company had little chance of being an agent of change.

CONCLUSION

Lafarge contributed to implementing in Chinese management values to which are far from foreign to the Chinese universe, but which have little impact on everyday business practices in this country: the concern for personnel, a value to which Lafarge is particularly attached, the rejection of arbitrariness and equality before the rules, inheritances from the common core of Western societal values(16). The action of the Group, implementing a "culture of performance", with all that this entails in terms of rigorous evaluation and fair retribution of individual contributions, investing significantly in training and placing great weight on safety, enabled these values to change status from being mere statements of principle to becoming a guide inspiring everyday activity. The great favour with which this evolution has been met reflects the distance which prevails in the matter, in Chinese companies, between ideals and practices. Lafarge has, in the end, enabled its Chinese personnel to take huge steps by implementing, in a business context, a Chinese vision of a good power. ∎

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(15) Etienne BALAZS, *La Bureaucratie céleste. Recherches sur l'économie et la société de la Chine traditionnelle*, Paris, Gallimard, 1968, coll. « Tel », 1988.

(16) It would be beyond the scope of this book to discuss the frontiers of what may be qualified as such, notably in Eastern Europe or in Latin America. We shall use this expression in a restrictive sense, to evoke European societies and their heirs, such as the United States, whose pioneering role in the emergence of modernity and the advent of rule of law is difficult to contest.

WESTERN AND CHINESE STYLE MANAGEMENT

COMMENT FROM A PRACTITIONER ON PHILIPPE D'IRIBARNE'S ARTICLE: "IN CHINA, BETWEEN *GUANXI* AND THE CELESTIAL BUREAUCRACY"

by **Dominique Poiroux** *

AN ANALYSIS BY PHILIPPE D'IRIBARNE, A REAL CHINESE DELIGHT!

For anyone who likes China, Philipe d'Iribarne's analysis reads the way you would savour a dish like Peking Duck, with gourmandise and relish, and in several very well defined steps! The attack is crisp: he tells us about the manager's version of the lack of political democracy in the Middle Empire, it prepares us for a methodical illustration of the autocratic exercise of power in the world of business, accompanied by "the submission of executives and the weight of the relations network *(guanxi)*". But, very soon, a contrast in texture heightens the attraction of the Lafarge case: the exercise of authority also means leading by example, by suggestion, by respect and attention, and by tact! This complementary analysis gives the entry into the subject all of its flavour, made all the more delicious by its being heightened through piercing comparison with "the clear cut affirmation of the American exercise of authority".

The description of "the pecking order", which Lafarge has been able to structure in his Chinese factory, is the centrepiece of this tasting, and to carry the metaphor even farther, brings out some reassuring flavours for the Western palate: an ordered world, concerned about performance, about the development of individuals, in a long term perspective!

The tasting experience is about to end, traditionally by a stock mixed with a few animal bones. The references to Chinese classics flow with delight: authority is firm because when power is too weak it can affect the country's stability, but this is balanced by a taste for fair, enlightened use of power, which in a nutshell represents the ideal of "celestial bureaucracy". The author considers Lafarge to have succeeded in getting through with "these conceptual references to the status of a guide inspiring daily action". A small ripple floats by without really bothering the harmony at the end of the tasting:

the Lafarge managerial method in China does not particularly develop the idea of "freely contesting the holders of power", which is after all a key of the democratic ideal, but which … is "sometimes a stranger in the Chinese world and that of the enterprise".

"Western" management functions in China in a business model that rests firmly in the minority.

What Philippe d'Iribarne describes, I myself practised along with my Chinese accomplice Xiangdong Zhang when I ran the Danone biscuit business in China(1) from 2002 to 2006 (Xiangdong Zhang was my HR manager and is now in charge of developing the Danone organisation in China). He has also benefited us by regularly hunting down Chinese talent trained in large multinational consumer goods corporations who are more pioneering than we are, just as today I recruit high-potential Chinese from the major pharmacy companies for my medical nutrition branch in the Danone group.

At the end of the 1980s, ten years after China started opening up to the world (1978), large multinational consumer goods corporations (notably Procter & Gamble) started recruiting the best graduates from the big Chinese universities, and they have made them into effective battalions of managers, with the job of initiating the country to mass consumerism (televisions, refrigerators, shampoos, cosmetics, etc.). They have thus started their ascension toward billion dollar turnovers. The multinationals have been quickly followed and copied by many small Chinese entrepreneurs, several of whom, at the end of the 1990s, caught up with them in size. This stiff competition will have had the merit of hoisting the Chinese from world N° 10 (1995) to N° 3 (2008) in private (mass) consumption, with all this leads to in the way of improvements to the standard of living, better hygiene, longer life expectancy.

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* Vice-president for France, Eastern Europe, Asia, Middle East, and Africa of Danone Advanced Medical Nutrition.

(1) For Dominique Poiroux's reflections on his experience, see "En quête de la voie en Chine", *Annals of the Ecole de Paris*, vol. XIII, October, 2007.
http://www.ecole.org/seminaires/FS1/SEM334

Today, these multinationals who practise western management as described by Philippe d'Iribarne remain very much in the minority as users of this business model. The standardised processes and costs of such models mean they can only address roughly 15% of the Chinese market (distribution or food processing, for example), corresponding to top-of-the-range products sold in top-of-the-ladder cities, essentially the capitals of the various provinces. These multinational subsidiaries are still mostly run by expatriates and therefore need managers who can work in English.

Such Chinese managers – well trained by multinationals and enjoying stimulating work conditions (as well as a high quality of life) – are still not numerous enough to fill all the opportunities in the Chinese market. In such an environment marked by a scarcity of talent, the boss cannot afford to take up the posture of "authoritarian challenger", who rules his troops with a rod of iron. There's a Chinese saying that goes "move a tree and it will die; move a man and he will be strengthened". Each of your employees is thus prepared to change companies very easily if he is "learning nothing new", if his bosses don't support him, listen to him, provide him with coaching, mentoring – all qualities of the Western way of management much appreciated by the Chinese, as Philippe d'Iribarne was able to observe at Lafarge! He is also liable to leave you most unexpectedly (after saying only the day before that he was very happy in your company), thanking you tremendously for everything you did for him (while still thinking nothing of it!). Today, for this highly privileged but minority category of managers working for large multinationals, their first visible sign of having adopted their boss's managerial style is quite simply one of changing bosses!

The "Chinese management method", a dominant model that is so effective!

The second way this free contestation manifests itself when it comes to Chinese working in a multinationals is the singing of managerial praises… about the local competitor, who every day threatens your market share and draws constant inspiration from your innovations, sometimes going even as far as launching them before you do. With Xiangdong Zhang, we in our team experienced such healthy contestation. It was always a powerful driving force toward managerial effectiveness, an ongoing incitement to do things more simply and more quickly.

Whereas certain multinational corporations manage to win over the richest 15% of consumers, it is indeed Chinese entrepreneurs who most often succeed in mastering "business models" that address the poorer populations, towns on the second and third rungs of the ladder as well as the countryside. What is striking about such successes is the searing pathway that leads to them and the ability of these entrepreneurs to master low-cost but very complex models, requiring a considerable number of distributors nationwide in China, an equally impressive number of sites, and a frenetic pace of innovation. To cap it all, in a world marked by mass advertising, successes are marked by impressive media coups, a combination of trickery and risk taking. Such is the case of the dairy enterprise Meng Niu ($ 1.3 billion turnover in 2005, 100% yearly growth from 2001 to 2005), which was able to lay its hands on the media successively with the first Chinese in space, the "Super Girl Show" of 2005, the preparation for the Olympic Games, and thus was able to maintain a growth rate to make any international manager green with envy.

From the inside, the managerial methods of these tycoons are very disconcerting. Xiangdong Zhang was able to assess them through immersion with partner businesses (notably Hui Yuan, a fruit juice company Danone had a minority share in). The dark side of everyday life is one of paramilitary training methods, personality cults, punishment for faults (following a Chinese saying "you have to kill the chicken and show it to the monkeys" – Sha Ji Gei Hou Kan), and promotion of heroic acts. It also reaches its limits when it juggles with fire, playing with consumers' health as seen in the recent crisis of melamine in infants' milk. This could well turn out to be one of the most dramatic reversals in fortune undergone by the Meng Niu company. It will have illustrated the limits of "Ji Gong Jin Li": go for the most immediate success without worrying about long-term viability.

This method has a positive side too, though. Through an intense Darwinian process of natural selection, a category of entrepreneurs has evolved who are well suited to the Chinese context. They are quick, matching the speed with which hundreds of millions of Chinese long to improve their everyday life; they are strategists, *i.e.*, they are round and open as long as they have not yet identified the business model that will earn them money, but then they become square, straight and intransigent, persevering and energetic in its execution as soon as they know what product they are going to launch with what slogan and by what method they are going to mobilise their distributors (the boss of Meng Niu first learnt his business with competitor Yi Li, a Chinese leader in dairy products, before going on to found his own company and catch up with his "master" in record time); they aim big, *i.e.*, they are the only ones who have no fear of launching initiatives on the scale of "Continent China", at unbeatable sales prices, which generate high business volumes and considerable economies of scale. Furthermore, they know how to spread their forces wide, by teaming up with other entrepreneurs around them, especially their distributors, thanks

to some good *guanxi*, upheld by the sharing of profits from the success spiral.

The town – I'm almost inclined to say "Chinese style business school" – of Wenzhou gives a good illustration of this process of natural selection and *guanxi*. This town houses a lot of entrepreneurs and has a reputation as world leader in the manufacture of cigarette lighters, spectacles, and shoes. In each family of entrepreneurs, the tradition is to send youngsters out to discover China with the mission of bringing back a business idea. On their return, this idea will be analysed by the family council so they can refine the business model, then it will be financed by mobilising family capital and finally put into action quickly, aiming at a mass market.

These two models will coexist for a long time yet: the way they complement each other is a source of growth for China!

We in our management committee – comprised of (you have no doubt guessed) young Chinese managers very aware of the Chinese entrepreneurial mindset – have therefore constantly sought our own "dynamic balance" between the need to make processes more thorough, rational, and repeatable, and the concern of not making these processes overcomplicated. We thus complemented the complex quantitative testing necessary to the justification of advertising with the development of collective intuition regarding our consumers' expectations, thanks to frequent meetings with them, including genuine immersion in poor, out-of-the-way villages. Thus we got into the habit of tasting many new biscuit innovations every week, as a management committee, in order to very quickly be able to select which ones were worth launching before proceeding

to a standardised sensory test process. Thus we very empirically and very rapidly implemented larger scale products before doing test markets for their roll-out. Thus it is we also started recruiting managers from second-rung towns (Nanjing, Xuzhou, etc.) in order to complete our solid teams taken from the better universities of Peking or Shanghai. And we set up leadership development programmes, so that progressively our better managers were able to be more self sufficient in their work, within a standardised framework, true, but with the ongoing message of retaining an entrepreneur's mindset: flexible, fast, instinctive, and above all connected to all persons in the company, a kind of western version of Chinese managerial *guanxi*.

Alongside this, what do the tycoons do? They send their offspring, who one day will take over their business, to be trained in the best universities in the world. And they recruit several good people, with a sufficiently sharp entrepreneurial sense, from companies like ours.

This permanent exchange between two management paradigms is at the core of Chinese growth, part of the famous slogan, "access to the Chinese market for Westerners in exchange for Western technology for the Chinese", issued by Deng Xiao Ping almost thirty years ago when China began opening to the world (Yi Shi Chang Huan Ji Shu).

But we do not delude ourselves: even if exchanges take place by osmosis between the two models, the market will still be overwhelmingly held by the Chinese model. And, as for the Western expatriate company leader in China, if he wants to contribute to the long-term survival of his company and find his way in China, he had better show humility, practise certain figures from the Chinese management model, and every day seek "Zhong Yong", a Just Medium in the Middle Empire – Zhong Guo! ∎

A FRENCH JOURNAL ON MANAGEMENT: SURVIV-ING AND THRIVING – THE CASE OF *GÉRER & COMPRENDRE*

For anyone familiar with journals in management, *Gérer & comprendre* stands out. Its many graphics are offbeat in relation to the text; and its articles appear under unusual headings: Overlooked…; Trial by fact; Other times, other places; Live; In quest of theories. In addition, the date of creation on the cover is intriguing: 1794. These peculiarities are to be set down to the environment in which the journal was created and the opportunities at that time. After explaining this, this article concludes that, rather than trying to blend in with a set of standards, international exchanges would be more beneficial if they capitalized on the diversity of traditions and institutions around the world.

By **Michel BERRY***

OVERLOOKED

RESEARCH IN MANAGEMENT AND THE SOIL FOR VINTAGE PRODUCTION

Let us spin a metaphor with wine as a cultural product. Some soils are well-suited for growing varieties of grapes that would not survive elsewhere. But to produce quality, the state of know-how must be excellent, and winemakers must feel severely judged if they are to resist temptation. When exporting wine to far away places, they might be tempted to let up on quality. Consumers on the other side of the earth will not

react right away, and might not even have taste buds that can tell the difference. The requisite vigilance in such matters is best left up to the guardians of customs and traditions in the local environment. In this way, wines with a sense of identity can be produced, and connoisseurs can recognize the origin and year of production (BROUSSE 1999). Globalization is tending toward a standardization that is gradually erasing the origins of wines, and thus threatening vintages with a sense of identity (apart from top-quality wines with originality).

In like manner, local conditions are more or less conducive to such and such research. Quality research will develop only if the appropriate talents are attracted and high requirements are set. A journal might be essential for the emergence of a new current of

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* Editor of the journal *Gérer & Comprendre*, Director of the École de Paris du Management, Director of research at the CNRS.

thought. In France, this was the case in the discipline of history with the *Annales*. Journals such as *Sociologie du travail* or *Actes de la recherche en sciences sociales* have staked out an identity because they are known for conveying an original style of research.

In the United States, a journal's quality is measured by the proportion of articles turned down for publication. Since the best-known American journals have a rejection rate of more than 90 %, they are, it is concluded, the best journals. However this only measures the American model's attraction and not necessarily its quality or originality. The American soil is not very conducive to certain types of research, in particular studies calling for a long stint of fieldwork that is not very compatible with the pressure to publish or perish. Such research is said to be "qualitative", and its results cannot be reproduced. Nonetheless, a positivistic approach pushes social scientists to use questionnaires and statistics – a reassuring approach in a context where numbers are sacred and the model of physics prevails (BERRY 1992 & 1995a).

SPECIAL CONDITIONS DURING THE GERMINATION OF *GÉRER & COMPRENDRE*

Around 1970, each of the two French *Grandes Écoles* in engineering set up its own research center in management: in 1967 the Centre de Gestion Scientifique (CGS of the École des Mines de Paris), and in 1972 the Centre de Recherche en Gestion (CRG of École Polytechnique). Since research at the time was seldom based on observation and experimentation – a fact engineers trained in experimental procedures were shocked to learn – these centers devised methods to remedy this situation.

The major obstacle was that organizations were not open to the curious, let alone to experimenters. Medicine had made progress thanks to dissection, but few organizations were willing to undergo vivisection, unless the advantages of having social scientists present in their midst could outweigh the disadvantages. For this reason, researchers developed what they called "clinical studies" during which long-term relations were woven with an organization around its problems (BERRY 1995b). This research soon led social scientists to stand back from the positivistic model. It revealed the value of a maieutic approach based on a dialog.

During a clinical case study, dialogs were organized in the field to discuss findings. Somewhat later, seminars were held where researchers and "practitioners" from the organization could discuss observations or theoretical approaches. From 1981 to 1988, a seminar "The ethnography of organizations" held more than eighty meetings with the objective of taking a fresh look at organizations. It proved seminal owing to its examination of noteworthy examples, such as the operation of

the French government(1). From 1983 to 1988, the "Group of thought on the automation of production" collected reports on automation in factories and exposed the considerable gap between words and deeds. Given the audience of these seminars, the idea gradually arose of creating a journal with a style similar to this research.

At the time, there was hardly any journal suitable for publishing the research produced in the two aforementioned centers. This research was far from the standards set in the United States. Even in France, it seemed a little odd. It would have been hard to obtain backing for founding a journal from scratch. Fortunately, an opportunity cropped up: *Les Annales des mines*, founded in 1794 and financed by the Ministry of Industry, was about to expire. At a time when France was shutting down its last mines, there was a dearth of topics and, even more, of inspiration. However public authorities did not want to let the oldest journal in France pass away. After all, it still had 1500 subscribers. Why not offer them new contents? Although *Les Annales des mines* was founded to circulate knowledge about mining, why could it not now do the same about management? I managed to defend this idea with the help of persons who attended the seminars.

DOING IT WITH STYLE

While looking back over the history of *Les Annales des mines*, we discovered that we were, in a way, going back to its roots. Next to nothing needed to be changed in Charles Coquebert's editorial in 1794:

"It was necessary to gather facts, multiply observations in the light of analogies. We have been in a hurry to build vast theories, but our enamorment with them is so mixed up with research that the observer no longer finds what he was looking for. […] Trusting in deceptive guides, funds are dissipated in buildings, in the costs of controls, in sterile expenses. […] Eager to spare our fellow-citizens such errors, which discredit the art of mining, we will, with them, follow the humble pathway of observation; we will draw few conclusions; we will have many a doubt; and we will make them wary of a self-assured tone so easy to assume and so dangerous to listen to."(2)

Although *Les Annales des mines* was a monthly, the decision was made to bring out a quarterly called

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(1) The results included several articles by Michel MATHEU and Philippe ROQUEPLO in *Gérer et comprendre*, issues 5, 9 and 23 respectively: "Cabinet ministériel" ["Ministerial cabinets"], "Regards sur la complexité du pouvoir" ["Views on the complexity of power"] and "Urgences et raison d'État" ["Emergencies and reasons of state"].

(2) The full text was reprinted in "Deux cents ans de regard sur l'industrie" ["A two-hundred-year look at industry"], *Annales des Mines* (the series *Réalités Industrielles*), July-August, 1989.

Gérer & comprendre(3.) The first issue came out in December 1985 following eighteen months of preparations.

From the very start, the idea was to adopt a style open to various disciplines and approaches; economists, sociologists, anthropologists, psychosociologists and historians were welcome. But the journal had to be kept from resembling a potpourri. The aim was to attract a readership of "practitioners". Articles should be well written, and should spare readers the long lists of quotations that make the reading of academic texts so tedious. Nonetheless the journal should be capable of convincing academics (suspicious of pleasant-to-read articles) to take it seriously. We counted on gaining the benefit of the doubt owing to both the prestige of the aforementioned *Grandes Écoles* and backing from the National Center of Scientific Research (CNRS).

To publish a journal with style, we came upon the idea of arranging the articles under headings.

– The heading "Overlooked…" underscores our attachment to observation, as illustrated by the article "Robots in practice, the reality hidden behind the myths" in our first issue (BERRY 1985).

– "Trial by fact" emphasizes experimentation, the testing of popular methods, as in "Isolating communication systems", an article that showed how computer systems can have effects contrary to those expected (PAVÉ 1986).

– "Debated" underlines the importance of discussing ideas, as in "L'évangile selon Saint Mac" (*Kervern* 1986), a critique by the chairman of the board at Aluminium Péchiney of the best seller, *Le prix de l'excellence.*

–"Other times, other places" bids a welcome to historians, ethnologists and travelers. This heading seeks to stimulate thinking, even if this means shifting points of view, as in an unexpected, extraordinary testimony about Renault from a retiree (SÉJOURNET 1987).

–"In quest of theories" seeks to draw attention to theories out of line with prevailing ideas. Under this heading, incipient currents of thought are aired, for example: the groundbreaking article on innovation by Madeleine AKRICH, Bruno LATOUR and Michel CALLON (1988).

The decision to carry illustrations was made to remind writers and readers that a journal does not have to be boring to be serious, abundant evidence thereof coming from 18th-century philosophers. The use of illustrations "offbeat" in relation to the text reinforced the message that the journal wanted to provide food for thought rather than offer precooked answers.

Gérer & comprendre's first articles were intended to illustrate this style. To forestall the risk of running out of material, the journal was launched only after having enough articles in stock for a year of publication. A rule was formulated: priority would be given to articles from outside the circle of the founders (even though the latter were among the first authors). The intent was to protect the journal from the suspicion that its pages were reserved for a small group from the "caste" of the *Grandes Écoles* and their allies. In fact, it took a few years before people were convinced that the requirements for accepting an article were the same for everyone. When the rejection rate is high (80 % at present), the author can entertain the consoling thought that the article was turned down because he/she does not belong to the right network!

THE JOURNAL'S FULCRUM: ITS EDITORIAL BOARD

Academia makes a distinction between journals with/without a committee of reviewers who select articles. Journals without peer review usually do not count for an academic career. For this reason, the decision was made to set up a committee for selecting articles but with the following rules.

The formation of a small standing group of reviewers

Academic journals normally ask outside reviewers to evaluate the papers submitted for publication. At *Gérer & comprendre*, a group with a dozen members reviewed all articles(4). Forming this committee was an opportunity to open toward other currents of thought, in particular Michel Crozier's Center of the Sociology of Organizations. This committee was brought up to number with practitioners and independent researchers with a sense of critique. Every paper submitted to the journal is assigned to two committee members, who set their opinions down in writing before the next meeting.

A collective discussion of submissions

This committee met every month (at present, every six weeks), all members invited. After the two reviewers explain their opinion about a submission, the committee deliberates. Thanks to this method, a speedy response can be given: less than two months as compared with seven or eight in traditional journals (when reviewers fail to send their comments, or the editor-in-chief, stuck with diverging reviews, has to look for additional reviewers). These deliberations make for lively meetings. The French love to discuss ideas, whence a strong *affectio societatis*, which has

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(3) *Annales des mines* went on to create the quarterlies *Réalités industrielles* in 1990 and *Responsabilités et environnement* in 1996.

(4) This committee currently has nineteen members. Now and then, help is solicited from outside reviewers.

turned the editorial board into a guardian overseeing the journal's editorial policy and style.

Debating partners

When the reviewers' opinions diverge so far that nothing can be done to bring them together, a referee is appointed to submit an opinion at the next meeting. If deliberations end with the paper being accepted for publication, the negative reviewer may publish a commentary; and the author may reply to it. Instead of a single article, there might be three(5).

The replies to authors are an invitation to exchange ideas. There are four sorts of replies: "Yes" (seldom given for the first version submitted), "No", "Yes, but…" and "No but…". The last two include comments asking the author to work on the text or discuss it. This exchange passes through the editor-in-chief, since reviewers do not know the author's name, nor does the author know the reviewers' names.

At the start, *Gérer & comprendre* opposed blind-refereeing, since it seemed to shy at debate. However French institutions have, one after the other, internalized American standards, including the intangible double-blind procedure. *Gérer & comprendre*, after a long period of opposition, adopted this procedure, since it did not represent a threat.

A JOURNAL IS NOT A BED OF ROSES

After having established its place in France, *Gérer & comprendre* has come face-to-face with globalization.

While looking through the first issues to find material for this article, I was impressed by the authors' intellectual freedom and triumphant tone. Since *Gérer & comprendre* conveyed nascent paradigms, it spent its first three or four years on the fringes of managerial circles. It then obtained institutional recognition and figured on the official list of journals that count for promotions in academia. Its editorial board grew to accommodate these institutions, while choosing persons in phase with the journal's philosophy.

Gérer & comprendre now counted in careers(6). The papers submitted soon grew in number as did… the rejection rate. Lest this recognition curb the freedom of thought expressed in its pages, initiatives were taken to keep the flame of originality burning. The journal celebrated its tenth anniversary in 1996 with an issue on management during the 17th and 18th

centuries that provided the opportunity to discover genuine exploits, such as Colbert's building in seven hours a ship with thirty canons to convince the king to invest in the navy (VÉRIN, 1996).

The question of globalization has gradually taken center stage. In particular, the major business schools, in order to attract topnotch foreign students and obtain recognition for their diplomas, have been preoccupied with international rankings and standards as they have tried, one after the other, to be certified AACSB or EQUIS (respectively, American and European accreditation). While boosting American publications, this has led to doubts about whether it is worthwhile to publish in French.

With a sense of foreboding, I went on a fact-finding trip to the United States in 1991 to explore the possibilities for marketing ideas "made in France" there. I was often greeted with interest, even enthusiasm, especially since "clinical" case studies were not easy to conduct in the American setting. Nonetheless it was hard to imagine publishing such articles in journals there. I studied the market for a translation of *Gérer & comprendre* into English, but librarians convinced me that the chances of success were next to naught. In effect, American professors only read what counts for tenure – and a French journal hardly counts. I came back with the following ideas (BERRY 1992):

– Copying the American model would signal an intellectual decline. Given the different configurations of the American and French systems, we can undertake research that is hard for them to do; vice-versa.

– Imitating would mean adopting the position of the "dominated", a not very profitable stance, as treatises on strategy show.

– We should set store on differences and thus reinforce our strong points. To this end, journals presenting top-quality research are to be supported; and their articles, to be made known internationally. This implies reckoning with English.

– *Gérer & comprendre* would not be a very good vector, since English-speakers cannot pronounce the title and its relations with *Annales des mines* are complicated. For this reason, the proposal was made to use the more significant label, École de Paris du Management(7).

The Paris School of Management was launched in 1993, and *Gérer & comprendre* held to its course. To put it mildly however, our pursuit of the foregoing strategy has not been a bed of roses. French business schools tend to push their professors to publish in American journals (what is positive) but also to

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(5) For example, Gilles MARION, "Totalfina+Elfina; comment lutter contre l'évidence" ["Ttoalfina+Elfina: How to fight against the evidence"]; Hervé DUMEZ's comments "Communication financière et analyse de discours" ["Financial communications and discourse analysis"]; followed by "Réponse à Hervé Dumez" ["Reply to Hervé Dumez"].

(6) Except for the members of the CRG, where the founder of the journal had imprinted his style of research, whence a suspected consanguinity even though the articles from CRG members were, of course, submitted to reviewers unaffiliated with the center who evaluated the submissions without indulgence. Nothing is ever simple…

(7) For more information, see http://www.ecole.org.

underrate publications in French journals (what is not necessary). *Gérer & comprendre* was underrated in one such school (even though it was the journal most frequently used in courses there), for a single reason: it is in French. Similar tendencies exist in universities.

What riled *Gérer & comprendre*'s editorial board most was an initiative taken by the CNRS. To rationalize its work of evaluation, the CNRS's Economics and Management Committee drew up a classification of journals. French "generalist" journals, including *Gérer & comprendre*, were ranked in the fourth category at best. Only journals in English could hope to be ranked in the first category. The lack of diffusion of the French language was the main justification given for this underrating of French journals.

Reactions were strong, among others: an open letter followed by a petition and a 2004 article in *Le Monde* (8). This had unexpected results. Support came in from Germany, Scandinavia and even England. It also triggered an increase in the number of papers submitted to *Gérer & comprendre*, which had tended to decrease under pressure from Americanization. The number of papers submitted from outside France is on the rise, not only from French-speaking lands. We might be at the point where the pendulum is swinging back, a familiar trend in history.

FOR PLURALISM

Globalization is pushing us toward a standardization that helps consumers find their bearings, even among vintages. However this is evidence of an intellectual decline, since conditions for "works of the mind" vary in extraordinary ways around the world. An institution attracts talented persons in one land, but repels them elsewhere. In a given country, value is, or is not, set on a career in research. Management systems encourage, or discourage, innovation. Researchers live in relative isolation, or fit into a group. Local conditions facilitate, or impede, the opening of new fields of inquiry. Practitioners are, or are not, interested in research. Critical inquiry is, or is not, tolerated. Etc.

This diversity is a potential source of wealth, but we must distinguish between two aspects of scientific work: the production of ideas and their diffusion. The first implies that arrangements for promoting a sense

of excellence are held in esteem: people never produce better than in their own language and according to their own native genius. As for diffusion, it supposes that vectors can be found for reaching the targeted public. English, the most widely used language, is, of course, the vector of broadest circulation.

Nonetheless, the supposition that the most widely diffused journals and languages are those that push toward high quality stems from a dismaying confusion between the production and circulation of ideas. *Gérer & comprendre* makes no claim to universality; but it does claim to defend a sort of research that can thrive on French soil, or even gain wider acceptance. The places where research receives backing from prestigious institutions with a long tradition of excellence have advantages for reaching out to the world by affirming their originality. "Old" Europe has a major role to play given its prestigious, original institutions and the variety of its traditions of excellence. However it must also have the will to do so. ■

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(8) Respectively: Michel BERRY, "Classement des revues, le CNRS va-t-il perdre son âme?", September 2003; and Michel BERRY, "La recherche en gestion doit échapper aux standards américains", *Le Monde Économie*, 31 March 2004.

MICHEL BERRY

DO YOU SPEAK ENGLISH OR GLOBISH?

DEBATED

English-speakers, who make up only 11,3% of humanity, are proud to speak the language supposedly used in the global village. However, many other people seem to speak an odd version of English, called Globish by the author. Non-English-speakers are often fluent in it, whereas English-speakers pain to speak and understand it. Might it not be time to recognize Globish as the world village's official language? This would free non-English-speakers from their complexes and force English-speakers to recognize how much effort they should make to be understood. And French would have a chance to thrive, along with many other national tongues that have difficulty maintaining a presence.(1)

by **Jean-Paul NERRIERE**, former vice-président of Digital Equipment Europe, sales manager of Peugeot automobiles, vice-president of IBM-USA

By definition, English is a language spoken in a country called England and, by extension, in the adjacent areas (Scotland and Wales) that form Great Britain or, to complete the picture, the United Kingdom (with Northern Ireland). Forty-five other nations have proclaimed English as their official language: in all, 480 million people – at most 11,3 % of humanity according to newspapers.

All these peoples have inflicted so many adjustments upon this language that it is profitable for William Gates to issue Microsoft software in nineteen debased versions, each with its own speller, for: South Africa, Australia, Belize, Canada, the Caribbean, India, Indonesia, Ireland, Malaysia, the Philippines, Trinidad and Tobago, Hong Kong, the United States, Ireland, Singapore, Zimbabwe, Jamaica and New Zealand in addition, naturally, to the irreproachable United Kingdom.

We are forced to draw the conclusion that English is neither a single language, nor a unified one. What to say then about this language resembling it that peoples as multifarious as the French, Italians, Koreans, Brazilians, Russians, Chinese, and so forth, strive to speak? We form, in fact, the majority – 88,7% – of the planet's population.

Besides, international communication is even more biased in our favor. The findings of the British Council, the highest authority on learning and speaking English, agree with us. According to *English next*, a major study commissioned by the British Council

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(1) This article, published in *Revue de l' Association des Membres de l'Ordre des Palmes Académiques* under the title "English ou Globish, le paradoxal et fabuleux déclin of the English language", attracted our attention. The author sent us an amplified French version. After circulating it among colleagues, we received so many reactions that we published it in the March 2003 issue of *Gérer & comprendre* along with excerpts from written reactions [editor's note].
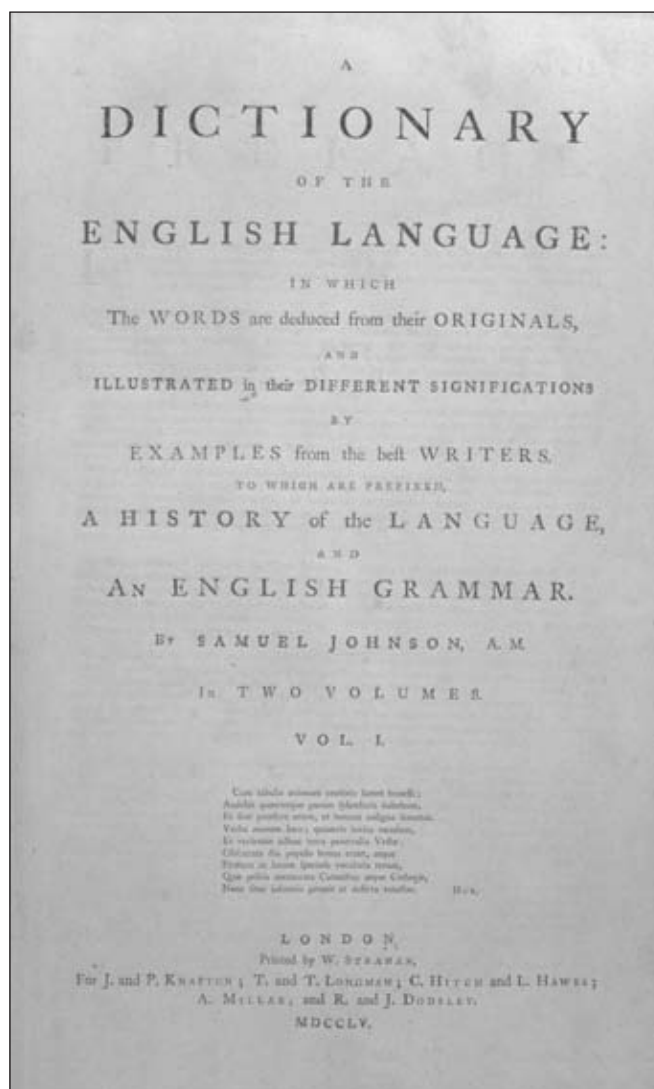
and written by David Graddol(2), 96% of international communication involves at least one nonnative English-speaker, and 74% occurs between nonnative English-speakers.

GLOBISH, THE VEHICLE OF COMMUNICATION FOR 88% OF HUMANITY AND 96% OF INTERNATIONAL COMMUNICATIONS

Our universe has recently shrunk owing to progress in communications, both physical (trans- portation, in particular air traffic) and dematerialized (telecommunications, fax, Inter- net, etc.). In what remains of it (now called the global village by convention), the inhabitants' common language is not English but a universal vehicle of communication with several distinct characteristics that deserve attention. I shall call this language "Globish". There is no doubt about it: Globish stems from English. But it differs as much from English as Thucydides' Greek from the language spoken by all inhabitants who had the slightest tinge of cosmopolitanism in the Roman Empire at the time when the message of Christ had started spreading. A practitioner of Classical Greek need but immerse himself in Christianity's founding texts to realize how much the language he knows differs from Koine (literally the "common language" with countless improprieties, approximations and simplifi-

"**Any white-collar working in a multinational firm has, some time or other, participated in a festive meeting where Argentineans, Finns, Thais and Senegalese were joyously chatting away until a Californian walked into the room. Suddenly, you could hear a pin drop. The only persons who dared continue talking were those who had a long practice in speak-ing to persons whose mother tongue is English.**"

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cations) and from the purity of the authors he met during a course of study once called the Humanities. As much can be said about Globish. This impure dialect is not intended to lead its speakers to an understanding of a culture or to a proficiency that could make them shine in Oxford. It is spoken in the trivial pursuit of efficiency in all places, at all times and with all people.

The confusion between English and Globish is, in fact, pernicious. Among the French and other Globish-speakers, it quite clearly causes a complex of inferiority in relation to the inhabitants of the 45 nations that have adopted English as official language or one of its official languages.

Any white-collar working in a multinational firm has, some time or other, participated in a festive meeting where Argentineans, Finns, Thais and Senegalese were joyously chatting away until a Cali-fornian walked into the room. Suddenly, you could hear a pin drop. The only persons who dared continue talking were those who had a long practice in speaking to persons whose mother ton-gue is English. The others became all ears as, huddled in a corner, they crouched in judgement on their own poor use of the language. A few minutes earlier however, everybody had been happily communicating something that well enough approximated their thoughts. Everybody was enjoying the faults made by others and their accents. Everybody was absolving the other speakers with a zeal that was proof both of the awareness of one's own imperfections and of the indulgent impunity that reigned in this gathering.

Who has not, some time or other, let native English-speakers go on talking without under-standing what they were saying and without daring to ask them to repeat?

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(2) English next on http://www.britishcouncil.org/learning-research-englishnext.htm. Los Angeles to Boston does not count in the statistics, but Sydney to London does, representing a tiny 4% of all international communication.

COMMERCE ANGLAIS.

Zé vos dis qu'il faut, qué vo ach'té ce poisonne to d'suite, no vollons qué vo
empposonniéz vo vériteblement, pou que no avions du thé bocoupe pou dégerer
conforteblement nos **Beef-SteaKs!**..

**Given their overwhelming numerical majority, nonnative English-speakers should teach native
English-speakers a lesson. The latter should learn that, since they speak Globish poorly, they
need to make an effort to improve.**

Who has not noticed that it not as easy to talk to a
Scot as a Portuguese?

Who has not observed that the Japanese prefer talking
to us, presumably in English, since the fear of losing
face leaves so many speechless in the presence of an
American?

Who is wrong? Someone who does not understand
native English-speakers, or some-one who does not
manage to make himself understood by a straying
Vietna- mese tourist? The native English- speaker or
the inhabitant of the global village who, coming from
a peasant family on the banks of the Danube, is doing
his best using a faltering tongue?

As vice-president of IBM-USA, I remember my much
appreciated colleague Edmund Conrad Gibson –
nicknamed Electrocardiogram after his initials, ECG
– sporting one of those superb shirts that you order
from your hotel room in Hong Kong, which he had
just visited. The tailor comes to your room, takes your
measurements, notes them on a form where you write
your name ("Print please", which does not mean
"print out" but "write in upper-case letters"). He will
deliver the order five hours later cut out of the cloth
you have chosen. An option is to have your initials
placed on the pocket or, less discreetly, on the cuffs.
Since ECG was sporting a shirt with the initials

R.E.D. on the cuffs, I teased him about having stolen it. Not at all! He explained at length and in detail his preferences and mo- tives. He had asked the tailor if it were possible to have the initials in red rather than in the customary blue. The tailor repeatedly made positive respon-ses, bowing each time as was be-fitting. ECG insisted, "I want them red! Under-stand? red? R! E! D! Goddammit, RED!" "Yes sir, Yes sir, R.E.D." To be clear, ECG had even used a red felt-tip pen to write RED in big letters across the form for jotting down the measurements. Would you be-lieve it? The tailor came back with twelve shirts marked with the initials RED, each initial artistically embroidered in blue! The laborious attempt to get rid of them had left marks that were even funnier than the initials. ECG madly vociferated against the congenital inability of Hong-Kongers to understand English.

I explained to him that, when he missed the hole in golf, he could blame the ball, the club, his excessive libations or himself (when clear-headed), but that I had never heard him criticize the hole itself. In this situation, the target of communication was the tai-lor in Hong Kong. If ECG had missed the target, it was surely his own fault, not the target's.

Given their overwhelming numerical majority, non-native English-speakers should teach native English-speakers a lesson. The latter should learn that, since they speak Globish poorly, they need to make an effort to improve. This would be asking so much of native English-speakers that the complex of inferiority would inevitably turn to our advantage. A simple, immediate procedure could be put to use. At the end of a sentence we do not understand, we need but ask, "Could you repeat, please, in Globish this time, if you can?" The effect will be outspoken, "Globish? Whazzat, 'nother Yurpean gimmick?" In the worst of cases, the opportunity will arise to provide educatio-nal propaganda about Globish and the speaker's grave lack of proficiency in it.

What makes Globish so different from English? Since the answer requires an explanation incompatible with this article's size limitations, I shall mention but a few characteristics by way of illustration.

GLOBISH IS SPOKEN WITH FEW WORDS

The English language comes in an authentic variety with 615.000 words (in the 1989 *Oxford English Dictionary*). Most educated English-speakers use from ten to fifteen thousand. By way of contrast, Globish is ideally spoken with 1500 words and, if possible, no more.

Which words? It would be practical were everyone to agree on the core vocabulary. In fact, such a list is already available for the public. It has come out of what Alain Rey, a distinguished linguist on the radio, has called the "courageous effort" that the French lan-guage has yet to make. The list, which goes under the name of "special English", is even paired with a dictio-nary on Voice of America's website(3). For forty years now, this radio has intelligently built up its world audience by broadcasting in this deliberately pared-down language. This language is intelligible both to most people in the global village and to native English-speakers, since whoever can do more can do less, at least in general.

A word to the wise about this core vocabulary: it includes the word "wise" but none of the following: discerning, sapient, farseeing, intuitive, judicious, sensible, prudent, sage, learned, shrewd, cunning, crafty, artful, foxy, keen, sharp (in this sense), wary, mindful, cognizant, acquainted with or smart. Whenever you or a Georgian – from Atlanta – picks a word out of this long list, what you say will be more accurate, cogent, precise, but only in the very few situations where you are speaking to a native English-speaker. In the global village however, using a distin-guished, overdrawn vocabulary reduces the chances of communicating effectively with 88,7 % of humanity. A choice has to be made: in favor of the presumed elite or of the oppressed majority, in favor of an aris-tocratic sense of perfection or of successfully perfor-ming a speech act (command, order…) that, other-wise, would not be understood by the listener whom the speaker, of course, has not clearly understood…

The playwright Pierre Corneille, it has been said, used 3500 words to write all of his works in French, inclu-ding the refined description of the feelings of Chimène and Rodrigue for each other. It has also been said that former Prime Minister Laurent Fabius has, on the television or radio, the talent of restricting his vocabulary to 300 words and, thus, increases his chances of having the French public understand him. This fine effort deserves our compliments, unlike Michel Jobert whom we heard on television calling Jacques Chaban Delmas a *coruscant* prime minister. Thinking I was educated, my mason asked me the next day for an explanation of this word (which means brilliant).

France has, unfortunately, failed to conceive of the reality described in the lines of this article. It, there-fore, makes its schools teach us English rather than developing our students' ability to enter into a dialog in the global village, and thus boost our exports. As a consequence, considerable effort is put into grasping the subtleties of Oscar Wilde or even Mark Twain; and an illusion of inferiority is fostered toward those

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(3) Check out http://www1.voanews.com/learningenglish/about-us/ for an introductory remark on VOA Special English; and the article by Ted Landphair, "VOA special English at 50 hits the fast lane", 25 August

2009, on http://author.voanews.com/english/archive/2009-08/2009-08-25 -voa17.cfm. For the vocabulary list, see the word book on http://www.manythings.org/voa/words.htm#H.

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brought up on the language of Buckingham Palace. Nevertheless, the chances of being understood in Ushuaia are slimmer with a highly polished English than with an efficient Globish. Globish deserves attention and should be taught as such in special courses. This effort-sparing simplicity would be justification enough for teaching Globish to all pupils, none excepted.

Éditions Diagonal, a company based at Sophia Antipolis in southern France, has made a software program, Glob-Lexis(4), which uses a dictionary limited to the 1500 standard words in Globish and words derived from this core list (for instance, not only "child" and "children", but also "childless" and "childish"). The software flags any word not on this list and automatically proposes synonyms from Globish or a definition using simpler words whenever there is no synonym (for instance, English has no synonym for "nephew", but you can always say "the son of my brother"… and be more clearly understood in Odessa!). With this program, persons fluent in English, native or not, are able to write texts that everyone else can understand. What is written might be wanting in academic elegance, but it is still perfectly correct English. I exercised using President Obama's inauguration speech. My Globish version has exactly the same contents, but ten times more people around the world can easily understand it. Although Globish tolerates imperfections as long as the message comes across, it is recommended to use a simple, correct language. This is, at present, the only software whose spell-checking feature accepts both British and American spellings. Being allowed to mix the two makes life easier for nonnative English-speakers, and does not at all impair what readers understand: "center" or "centre", "gray" or "grey", makes no difference. Let us take this idea a step farther by imagining that students could sit for examinations in Globish composition to measure the candidate's aptitude to respond without using words not on the acceptable vocabulary list. Computers (scanners, etc.) could process these exams. The scores would reflect the candidate's aptitude to stick to the list instead of his ability (very detrimental in Globish) to use a sophisticated, specialized vocabulary.

So much for the ability of candidates to express themselves in Globish, but what about their aptitude to understand the Globish spoken to them? The vaster their vocabulary, the greater their chances of possessing the word hoard necessary for understanding the influential minority made up of British, Americans, Australians, et al., whose efforts to limit themselves to Globish are still less than certain. The difficulty is to recognize many words but only use 1500 of them… But did we not encounter the same difficulty when

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(4) See http://www.jpn-globish.com/

learning our mother tongue? After all, each of us recognizes ten times more words than we use.

GLOBISH IS SPOKEN WITH MANY WORDS

If the vocabulary has to stay small, then a larger number of words will have to be used to express concepts, all of them in the intended concept's vicinity but none of them corresponding exactly to it. Only the words, as they accumulate, intersect the semantic field at the place that best intercepts the intended meaning. To express "cunning", a proscribed word in Globish, you will first say "wise", then, in a new sentence "very organized", and finally "hard to trust". In this way, you manage to focus in on the target. If only 90 % of listeners understand the first word, the rate of comprehension will rise to 99 % after the second.

You navigate by approximation, no one will have understood everything; but the result will be more satisfactory than resorting to "cunning", which some listeners will not understand at all. You win by making successive advances in comprehension along the lines of what you want to say while avoiding misunderstandings or total incomprehension.

To effectively express one's thoughts in Globish calls for an exceptional sense of discipline. Talk a lot, restate the same idea several times in a row while using different words, replace the accurate but seldom used word with a series of terms that end up delimiting the idea and increasing the chances of being understood. This is the very opposite of what happens when we use our mother tongue, where concision and precision are the mainstays of communication.

GLOBISH IS SPOKEN WITH THE HANDS

In multinational circles, we come across ill-intentioned persons who claim that Italians speak English very well but understand it very poorly. Italians naturally use countless gestures to accompany the voice. If only the persons responding to them did as much! However a sense of modesty along with the use of the written language and of the telephone have made gestures lose ground to exact terms chosen out of the vocabulary.

Speaking English to an Englishman does not require gesticulating, but speaking Globish in Osaka is done better with gestures than without. It is necessary to relearn how to use body language (the hands, facial expressions, etc.). To make a long story short: declaim less and perform more – like an actor.

When the Europeans reached North America, the natives were speaking more than 500 different languages belonging to 42 families. But they also had a sign language that enabled them to communicate

across the continent, despite the incoherent variety of tribal languages. Even the invaders managed to understand them with ease. The explorer Francisco Vasquez Coronado noticed that while questing, in 1540, for the Seven Cities of Gold – an unsuccessful expedition that led him to discover bison and the Grand Canyon instead. The natives had told him in sign language that the canyon was far away, and their indications were clear enough even for a Spaniard (according to the conquistador's account).

To speak Globish, you need to work at controlling the pace of speech, the first physical change to be made. Globish is spoken slowly while articulating as distinctly as possible. The Voice of America programs in "special English" – the radio is not familiar with the neologism "Globish" – are recorded by deliberately pronouncing words at two-thirds of a normal conversation's speed.

We others, the French, have an advantage, since most native English-speakers have an unfortunate habit. When you plead with them to talk more slowly, they try but fail to do so, and then start talking louder. They confuse a sound's volume with its speed. Ours is not to suffer from the failure to make this distinction.

GLOBISH IS EXPURGATED OF EXPRESSIVENESS AND FIGURES OF SPEECH

Do not commit the grievous mistake of translating figures of speech from your mother tongue. Have you ever tried to make anyone other than a native French speaker understand that your lumbago forces you to sleep *en chien de fusil*, literally in a "dog of a gun" (*i.e.*, curled with knees pulled up in a fetal position) or that it makes it hard for you to take a walk in Manhattan longer than a few *pâtés de maisons* ("loafs of houses", an odd reference to gastronomy meaning "blocks").

Native English-speakers have their own figures of speech. When they use them, they impair a little more the effectiveness of what they intend to say in Globish. Do not imitate them. What does "touch base with someone" mean? Or "hit a home run", "cover three bases" or a "pitch" (in place of a "talk") to someone in Istanbul who has never seen a baseball game?

GLOBISH IS SPOKEN USING EDUCATIONAL AIDS

Audiovisual aids are indispensable when communicating: skins for overhead projectors, computer presentations, documents distributed before the meeting, drawings and illustrations doodled on a sheet of paper or the whiteboard, etc.

The minutes of meetings should be written live, using

a Dictaphone, in the presence of the persons gathered. In this way, it is possible, once again, to check on how much they have understood.

During a meeting or interview, the level of comprehension should be evaluated frequently by asking questions, summarizing the points made, writing a list of intermediate conclusions on the whiteboard, taking breaks (supposedly for coffee) and watching the body language of the person in the group who says the least so as to gauge his level of comprehension – a thousand small habits that those of us who have frequented multinational circles have acquired through experience and that deserve to be systematized and taught. Although nothing of all this matters in English, it is a matter of course in Globish.

GLOBISH IS ACCEPTING OF ANY ACCENT

An American from Los Angeles or an Englishman from Birmingham hears his language spoken with an exotic accent many a year after having heard his mother tongue for the first time. In the meantime, during childhood and adolescence, everyone in his environment spoke with the accent that has become his own. Once grown up, native English-speakers spend about 98% of their time talking to compatriots and 2% speaking in Globish with people whose pronunciation is, to say the least, strange and approximate.

What a difference with Globish-speakers! They, too, spend their lives talking in their own language with the people around them. But when they use the vehicle of global communication, it is with Japanese, South Americans, Ukrainians, Arabs from the Gulf… and, inevitably, with the natives of the 45 lands that have adopted English as an official language (the aforementioned minority), each land with its own distinct accent.

These belated students of Globish share a trait that is fully to their advantage. Their ear has developed an unbelievable tolerance for all these incredible accents, which are so often unintelligible to native English-speakers, especially to whoever has landed in the global village after leaving their home in Illinois. It is a superior advantage to be able to understand others well despite their lack of proficiency in the language spoken.

GLOBISH IS ULTIMATELY A DISADVANTAGE FOR NATIVE ENGLISH-SPEAKERS

Let us follow this idea a little farther. There is no proof that native English-speakers communicate better in the global village, nor any grounds for such an advantage, even though this assumed superiority

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endows them with, alas!, a seldom disputed reputation. It is easy enough to prove this seemingly paradoxical assertion. The story about the tailor in Hong Kong tells more than an anecdote. It sheds light on a widespread mentality that might be put in the following words: "Given the postulate that English is the vehicle of international communication, and given that I speak English since I know how to talk, the onus of proof is not on me but on you. If you don't understand me, or I don't understand you, you're the one lacking in proficiency. It's up to you to sort things out; I'm blameless by birthright."

Several years ago in Cannes, I chaired a congress of Europeans who were using a certain major brand of computer. I delivered my introductory speech and personal viewpoint before my American boss (who came from Fort Worth, Texas) made his. The coffee break was deliberately long in order to facilitate informal exchanges. I am still surprised, though wrongly so, by the number of participants of all nationalities who spontaneously complimented me on my speech. Several of them even said, in Globish, "At least, we understand what you say." My only advantage was that I had tried to express my thoughts in Globish, a language in which my dumbstruck boss was not at all fluent despite his Texan English.

It is a thousand times easier for a Frenchman to express his thoughts in Globish, by restricting his initially poor English vocabulary to 1 500 simple words, than for a native English-speaker to do so, since his current vocabulary has, for years now, run up to ten or fifteen thousand words. Let us cast aside our complexes! Take notice of what is happening on the Internet, where exchanges take place in an elementary language that, though toned down, suffices for the communication at hand. Let us go on improving as much as possible our accent and our knowledge of grammar; and live utteringly happy. The disadvantage from which native English-speakers suffer peaks in written communications. But it rises along with the speaker's rung on the organization's hierarchical ladder. Those who receive written correspondence read it later, when they can hide in order to shamelessly look up words in a dictionary, thus making up for what they feel to be their native lack of ability.

However advances on the career ladder lead to awkward situations, since the person signing a correspondence is less and less likely to be the person who has written it. For example, Peter Smith, a vice-president born in London, receives for signature letters prepared by Vincenzo Domani, born in Bari, Apulia, Italy. The letters are riddled with blemishes of the sort still frequent in Globish but that would embarrass a native English-speaker. What to do? Correct Vincenzo's writing? That would hurt his feelings, even more so since he has sincerely tried and would not like to hear that his English is a pidgin. Or send the letter as is and become the laughingstock of native

English-readers who, receiving the letter, will probably think, "Doesn't Smith bother to read what he signs?" The worst situation arises when the writer is American and the person signing is British, both proud of their English. They set down on paper two close but not identical languages. How to correct the American's English? How to avoid being ashamed of signing a letter that merrily mixes "neighbour" and "neighbor"? In this case, it is better to come from La Beauce or Provence. What is unacceptable and degrading in English can then be said to be an exotic, colorful variant in Globish – as long as the message to be conveyed is understood.

GLOBISH IS THE FRENCH LANGUAGE'S BEST CHANCE FOR SURVIVAL AND PROSPERITY

It would, rightly so, be appalling were English to become the world's language. But that is not at all the language's foreseeable destiny, as I hope to have shown: 88,7% of humanity is going to start, little by little, speaking an unintelligible but very efficient Globish derived from English. To be understood in the global village's new dialect, native English-speaking authors are going to have to make the vow of impoverishment in their own language. They will experience the schizophrenia of pairing a lovely and unusually rich native tongue with a lingo that, though pared down, is up to the task outside the land of their ancestors. This second form of speech will inevitably contaminate and impoverish the first.

Being upset because a few French-speakers have preferred writing an article on medicine in English instead of French is acceptable, as long as you believe that they are, indeed, using English. Let us entertain for a minute the idea that it is Globish, whose diffusion can but muffle English. Globish, this minimal language, has no more chances of supplanting French than the Greek used in the Mediterranean basin two thousand years ago had of becoming the language of Europe. Thanks to this entertainment, we come to see that the language preference for the article on medicine does not amount to an attempt to assassinate French. It is purely tactical. If you want to be read everywhere in the world, you have to write in Globish. As a consequence, a letter or report written by a native English-speaker will be less read than one written by a Frenchman, whose Globish, insofar as it is congenitally limited, will increase the article's diffusion.

Despite the seeming paradox, we should, logically, shift toward a situation where English will be fully discredited in favor of a remote and deliberately underdeveloped variant, Globish. French, as well as all other tongues, will thus maintain its ground as the language of a culture, an art of living, and an intellectual refine-

ment for whoever wants to attain proficiency in something so gratifying and complex. Neapolitans who want to pick their brains and broaden their culture should, no doubt, learn French. The more proficient they are in it, the higher their level of culture and humanity, in all respects. They should also carefully avoid devoting as much effort to English, since too much proficiency in it would put them at a disadvantage in the global village, where it is better to restrict oneself to the 1 500 Globish words – lest the shirts you order come with the wrong initials on them, lest you make an Oriental lose face and lest you have trouble being understood by anyone not belonging to the 11,3% of humanity whose parents leaned over the cradle rapturously baby-talking in English. Admitting that English, given its worldwide diffusion, is the biggest threat to the influence of French, let us then imagine that I would write an article claiming to know how to reinstate French as the language of diplomacy and the preferred vehicle for international communication. People, at least in France, would prick up their ears excitedly. Imagine that I then told them, "You have to speak and write French with only 1500 words, in simple sentences of less than thirteen words, while using body language and audiovisual aids." What would we not read in French newspapers were we forced, for the sake of efficiency, to learn how to use no more than 1500 words to waggle our *belle* langue? Linguists would accuse me of "slaughtering our language", but they should agree that such a recommendation for the competitor of French amounts to a support of our language, its status and influence.

PRO AND CON

We received several enthusiastic reactions, including a few written ones. As you will see in the excerpts below, J.P. Nerrière's ideas have also been met with skepticism or disagreement.

I have forwarded this article to all foreign language teachers here. It reassures English teachers about their teaching of English while using the TOIEC to measure the level of students in Globish. And it reassures the teachers of other languages (German, Portuguese, Russian, Chinese, etc. – nearly a hundred of them) about the relevance of their work and about their own occupational prospects! In short, a true message of peace for two groups engaged in ongoing warfare: those who teach languages other than English are jealous of the predominance of English in the curriculum […] and English teachers are tempted to exercise hegemony.
Professor at an engineering school

This amusing text brought to mind funny memories from my training period in a French multinational firm. The departmental head made me take out a few

words that he deemed too rare from a presentation I was preparing. I also recognize the situation where no one could understand the only American in a group of French, Spaniards, Austrians, Turks, etc. with whom I was working. Some persons said, "As soon as John opens his mouth, I don't understand anything." I remember a telephone conference where I was at one end along with a Frenchman who gibbered English with a heavy accent from Toulouse, and the American was at the other end with a few other people. Whenever the American asked the Frenchman a question, the latter did not understand he was being addressed. So I had to elbow him to indicate that it was up to him to answer!
However I don't really believe what is said about Globish not being a menace for national languages. The very way the text is written in French illustrates this perfectly. The number of Anglicisms to be found in a text on the survival of French in comparison with English is irksome.
Alfred Galichon, a mining engineering student

This is also the theory of Claude Hagège, a professor in linguistics at Collège de France. But it does nothing to exempt us from learning English. Besides, Globish is all the more acceptable insofar as it comes close to English. When you hear the English spoken by Nordics (Swedes, Danes, Norwegians, Germans), it might not be classical English, but it's very close. And in England, there are local varieties: Cockney in London, Manchester, etc.
What bothers me about this theory is that it often serves as an alibi for laziness. When I was writing my dissertation, I was not allowed to publish it in English, but I soon came to see that those who held this opinion were simply unable to publish in English […] just as the zealots for publishing in English are often incapable of writing in "good" English. All that is so obvious and ridiculous. In the countries I mentioned, the papers are in good English. Having said that, I know the author whose career was at IBM!
Alumnus of a French "elite" university

An excellent and quite pertinent article. Let us not forget that the characteristic of a living language is […], for better or worse, to live! What is really the worst is to be petrified, academic, dead. Latin was not created in its standardized form *(De viris illustribus)* till the 19th century as the universal language for the Catholic Church. At the time of the Roman Empire, it thrived. The barbarians did not fail to utter the barbarisms that the French Academy would stamp with its approval as it officially decided what should amount to correct usage […] We were intellectually swindled in our youth by those who wanted to make us believe that a language is a constant, that the "real language" is found in dictionaries. On the contrary, a language changes over time, it is a mold capable of

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coining words for fleeting feelings. Its capacity for innovation sheds light on the evolution of techniques and demonstrates the creativity of its speakers. All great writers, from Victor Hugo to Frédéric Dard, have forged new words.

The dead languages […] should be placed in an eco-musuem next to hoes and harquebuses. Teaching should focus on language changes, the origin of words, the power of a culture that, by creating new concepts, imposes on the whole planet the words for referring to them to the detriment of the tongues of the peoples who have fallen asleep. A word conveys a culture. Is it reasonable to translate *directeur, encadrement, groupe de travail* or *usager* by "manager", "CEO", "task force" and "customer"? The one group belongs to a sedentary, static culture that is defending its territory: what is mine is mine, but what is yours can be negotiated. The other belongs to a nomadic culture of action and movement.

Nor should we forget that, even granted a changeless formalism, words grow old, wear out. Standing up on the left side of the bed, they lie down to die on the right. Besides, a civilization judges itself by its capacity for peacefully assimilating immigrants ranging, in French, from *couscous-merguez* to *bifsteak* (beefsteak), not to forget *feeling* or *blues*, nor the return of its own emigrant words whose meanings have shifted during their sojourn as they rediscovered their French form.

Esperanto was an excellent but technocratic idea. Broken American English (BAE) arises out of the biological need of the peoples of the world to be able to understand each other. The problem is not to judge but to adapt ourselves. It is not the timber work in a mine that is going to hold up a thousand meters of ground for a very long time. You have to advance, or else what has already been done will cave in on you.

PS: Indeed, the English and Texans speak BAE less satisfactorily. Recently, during a conference of European senior researchers, where the two official working languages were French and English, the French president proposed to a cheering audience to dismiss the interpreters, who were an impediment to comprehension, and to switch to English, under condition that the British promise to speak BAE like everyone else. […] While representing our country on an OECD task force at the Château de la Muette in Paris, I was the only one who used the language of Astérix. This put me, I have to admit, at a major disadvantage for being understood! Italians, Belgians, Greeks, representatives from Brussels, all were speaking in BAE […] Only the Canadian, who (like myself) was caught up in a web of domestic diplomatic requirements, tried to utter one out of two sen-

tences in English. The Belgian was quite happy to not have to choose between Flemish and French."
Jean-Michel Yolin, member of the Conseil Genéral des Mines (Today, Conseil général de l'Industrie de l'Energie et des Technologies)

Charming but lacking in realism. It underestimates the impact that the dominant language has simply because it is the dominant power's language. It is the language of foreign elites who are trying to draw closer, a matter of mimesis for everyone else. Incidentally, it could also lead to a vast population of slaves gibbering away in a limited pidgin and to an elite that recognizes itself through the purity of its language. […] In brief, I am not convinced. But it is well written.
A top civil servant in the French Ministry of Industry.

This discussion of Globish vaunts the merits of French and pokes fun at the poverty of English. The assailants claim that English doesn't have a future while French does. Let's meet ten years from now in the European Union, and we'll see which language will be spoken in all meetings and used for publications.

Globish was something else at the start. The intent was to simplify the spelling so that English could be pronounced by everyone. How to guess the difference in pronunciation between "though", "through" or "tough"? or, a better example, between "sew" and "new"? Furthermore, the advocates of Globish propose, I believe, doing away with existing accents in favor of a syllabic accentuation as in French.
Gilles Pourbaix, a language trainer

Thanks for sharing with me this humorous text lacking in any nastiness. However our colleague seems not to have heard of Franglais during the 1960s! Nor is he aware that Oxford English – which inspires him with dread and awe – is, in fact, a successful pidgin like Koine Greek or kitchen Latin. What we, the French, fail to see is that a language arises out of an erratic process and achieves unity only through economic or political power.

In short, our language is our mother; and a mother can only be a virgin. In no case can she consent to being made pregnant by persons who are not certified grammar teachers or members of the French Academy. Cartesianism is a magnificent fantasy that helps us live; but if you scratch the surface, you soon see that it is an illusion. As for Globish, it is hard to imagine that anyone can fix the rules. So there is no solution; or to be exact, the solution lies in the balance of power. German almost became the official language of the United States, and French has seen its hour of glory.
Jean Kalman, an English teacher. ∎

FAILED LANDINGS IN BAD WEATHER

As a sign of tension between natural and economic forces, failed landings in bad weather represent an original risk situation. Natural factors play their part, as wind and rain, crucial variables, are hard to determine precisely at any one time. But economic factors are equally important: rerouting is expensive, competition is strong, runway ends (known as blast pads) are managed to the square yard, etc…

By **Christian MOREL***

Article translated from French by Marc Idelson

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IN QUEST OF THEORIES

Catastrophe (or risk) theory is a widely studied area. One might legitimately ask why pursue new developments in this already fairly well researched field. It so happens that failed landings in bad weather bear an interesting feature: natural variables have a high degree of indeterminacy, and have resisted man's many attempts to model them. Many hazardous human activities are, of course, subject to nature's whims, but a plane landing in bad weather is particularly exposed: we see airline pilots do not know how much rain sits on a runway in real time, but needs this input to determine the required landing distance.

When I learnt, through the media, of the August 2005 Air France flight overrun at Toronto airport during a storm, of the Airbus' destruction by fire and of the passengers' narrow escape, I asked myself what caused such an accident. I naturally thought of a technical failure. So it was with great curiosity that I looked forward in 2007 to the release of the Transportation Safety Board of Canada (TSB)'s inquest report. The media having briefly and fuzzily mentioned this report, I threw myself into it. I have read it and I have apprised myself of its technical aspects. I discovered a number of other, similar accidents that had occurred, and I consulted the reports of some of them. I have come to the conclusion that missed landing in bad weather is a particular type of disaster. They are the result of a tension between, on the one hand, poorly defined and costly to manage natural data, and, on the other, economic pressure. I will attempt, in my conclusion, to situate failed landings in bad weather within a larger typology of disasters.

THE TORONTO ACCIDENT: THE LANDING DISTANCE IN THE MANUAL EXCEEDED THE RUNWAY'S LENGTH

On August 2nd, 2005, at 11:53 a.m., Air France Flight 358 – an A340-313 Airbus – takes off from Paris for Toronto, with 297 passengers and 12 crew members on board. On final approach, the radar shows heavy rain: a heavy storm is hitting the airport. On landing, the aircraft cannot make a complete stop and overruns the runway. It ends up in a ravine and catches fire. Passengers and crew manage to all evacuate before the fire reaches the escape routes. Two crew members and ten passengers end up seriously injured during this accident.

Toronto airport's runway is 2 743 meters long. As the Air France Airbus lands on August 2nd, 2005, it weighs 190 tons (t) and the runway is wet with 6-7 millimetres of water – approx. ¼ inch – and is subject a 10-knot tailwind.

The A340-313 manual, provided by Air France to its pilot, indicates the required landing distance, given the aircraft's weight, the contamination of the run-

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* Sociologist

way, tail wind speed, the airport's altitude and whether reverse thrust is used or not (cf. attached table). The actual conditions of flight AF358 on August 2nd 2005 produce a recommended landing distance of 3 215 m. The runway length, at 2 743 m, is too short. Even given a more optimistic tailwind (of 5 instead of 10 kn), the recommended landing distance shortens to 2 811 m, still too long for the runway.

In addition, the aircraft flew over the runway's start 40 ft (12 m) higher than the norm, and reverse thrusters had been belatedly engaged. This lengthened the landing distance. Press articles attributed the overrun to these two facts. But even if both the runway approach and reverse thrusting had been executed at nominal levels, the onboard manual prescribed landing distance would still have exceeded the length of the runway.

Landing on a too short strip spontaneously brings to mind pilot error. However, this is not the case. In fact, Air France procedures did not incorporate an explicit recomputing of landing distances based on actual weather observed on arrival. "The crew was unaware of the landing distance required to land … on a contaminated runway"(1). At takeoff, the required landing distance was determined based on the anticipated weather on arrival. Should weather conditions deteriorate during the flight, no specific procedure existed for reassessing the landing distance required. After the accident, Air France made a point in its procedures to emphasize the importance of calculating the actual landing distance on arrival, according to the weather discovered on approach. Air France was far from being the only airline that did not include a specific procedure for determining the actual distance required on arrival. The US Federal Aviation Administration (FAA), concerned by repeated missed landings due to bad weather, issued a safety alert(2) in August 2006. It states that half the surveyed airlines have no procedures for assessing the landing distance required on arrival depending on weather observed in real time, even when conditions have worsened since takeoff. Even those who do take worsened conditions into consideration ignore runway contamination data. And most of those who do this on arrival assessment take no safety margin.

This procedural flaw is related to the fact that landings in very bad weather are subject to *a strong natural indeterminacy*. What I mean by this is that the data is particularly diverse, complex and shifting, when weather is at its worse. Moreover, *diffuse economic pressures* amplify risk. I will now examine both mechanisms.

But I must first define what I mean by "very bad weather". This encompasses what is called in air navigation convective weather (storms, wind, rain, monsoon) and milder conditions, albeit ones which make runways slippery (*e.g.* when melted snow is present).

RUNWAY CONTAMINATION

Uncertainty resides in two natural variables: rainfall and wind conditions. In aviation, a runway heavily disrupted by rain, snow or ice, is deemed to be *contaminated*. A first dimension of uncertainty is that the mere concept of *contamination* is fuzzy and multifaceted. I did not find a clear, mutually agreed upon definition. The Airbus A340-313 manual states a runway is contaminated if there is a layer of water of 3 mm or more. The Cessna Citation 551 business jet's threshold, on the other hand, is 0.25 mm. A 2 mm water layer contaminates a runway for the Citation, but not for the Airbus. The FAA, though anxious to bring some consistency to the subject, in its alert merely defines the contamination by listing contaminants – standing water, snow, slush, ice, sand – and defines a wet runway as uncontaminated. I consulted Air France expert Captain P. (an active captain with security duties); he believes contamination or not of a runway is determined as follows: moist if it has changed colour; wet if it has become shiny; *contaminated* if the water level is measurable. The Canadian Regional Airlines Fokker F28 manual holds other definitions, with different intervals. It distinguishes the following conditions: wet means under 0.25 mm of water; light rain, 0.25-0.76 mm; heavy rain, 0.76-2.54 mm; hydroplaning, over 2.5 mm(3).

Furthermore, though textbooks define contamination by water levels, these are actually impossible to measure. This is intuitively understandable: how can we determine, for instance, whether water is shallower or deeper than a quarter of a millimetre? France's Bureau d'Enquêtes et d'Analyses pour la Sécurité de l'Aviation Civile (BEA), the French body responsible for technical inquests into civil aviation accidents or incidents, explains: "We do not know how to operationally measure [runway] water levels"(4). According to Captain P., airport officials are careful not to announce runway water levels, for fear of assuming responsibility for a very random variable. Canada's

(1) *Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A05H0002, Sortie en bout de piste et incendie de l'Airbus A340-313 F-GLZQ exploité par Air France, à l'aéroport international de Toronto/Lester B. Pearson (Ontario)*, 2 August 2005, p. 133.

(2) Federal Aviation Administration, Safety Alert for Operators, Landing Performance Assessments at Time of Arrival (Turbojets), 31 August 2006, p. 4.

(3) *Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A00A0185, Sortie en bout de piste du Fokker F-28 C-GKCR exploité par les Lignes aériennes Canadien Régional, à Fredericton (Nouveau-Brunswick)*, 28 November 2000, p. 4.

(4) *Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, Incidents en transport aérien, Sorties longitudinales de pistes à l'atterrissage, p. 4.*

TSB concurs: "Few, if any, airports provide information on runway water levels(5) … For operations on wet runways, flight crews have no real way, such as runway water levels, to determine the condition of a runway before landing." (6)

This is obviously a problem: aircraft manuals provide landing distances according to runway water levels. But since water levels are unfathomable, crews cannot determine the resulting landing distance. Canadian investigators point to a strong consensus among interviewed pilots stating lack of information on runway conditions due to significant rainfall represents a serious hazard.

landing distance of 1 379 m, assuming the just shovelled runway was simply wet. Unfortunately, within minutes, the runway was again covered with melting snow, increasing the nominal landing distance to 1 652 m, a greater length than the runway's(7).

The indeterminacy of the slippage rate may be enhanced by factors such as water accumulation caused by wind (contaminating some runway portions but not others), irregularly melting snow, leftover landing gear rubber and specific features (*e.g.* some runways, when wet, are particularly slippery, such as runway 35L at Congonhas Airport in São Paolo, Brazil, where a TAM Airbus overran the runway, and 199 people

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"In aviation, a runway heavily disrupted by rain, snow or ice, is deemed to be contaminated". Plane on the ground, in the rain, May 2000.

In addition, contamination is a rapidly evolving phenomenon. It may only take a few minutes for rain to change a runway from *wet* to *contaminated*. On November 28, 2000, a Canadian Regional Airlines Fokker with 42 passengers on board overran the runway at Fredericton, New Brunswick airport. The runway had been covered with melted snow, which had just been shovelled away. The crew computed a

died). This case provides another example of indeterminacy: an ungrooved, wet runway (like Congonhas) may be equivalent to a contaminated runway (grooves, though, are not an ideal solution, as snow and ice can embed in them).

However, contamination – a rapidly evolving, multifaceted phenomenon with neither a commonly agreed definition, nor a means of measure – has considerable

(5) *Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A05H0002, sortie en bout de piste et incendie de l'Airbus A340-313 F-GLZQ, exploité par Air France, à l'aéroport international de Toronto/Lester B. Pearson (Ontario) le 2 août 2005, p. 53*

(6) *Op. cit.*, p. 117.

(7) *Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A00A0185, sortie en bout de piste du Fokker F-28 C-GKCR exploité par les Lignes aériennes Canadien Régional, à Fredericton (Nouveau-Brunswick) le 28 novembre 2000*

impact on landing distances. Compared with a wet runway, 3 mm of rain increases a 190 t Airbus A340-313's landing distance by 900 m. Crossing the 0.25 mm threshold increases the Cessna Citation 551 business jet's landing distance by 423 m(8). A mere quarter millimetre of water increases by 423 m the landing distance!

Precipitation, besides making roads slippery, irregularly reduces visibility: therein lies another natural factor contributing to environmental uncertainty.

Sudden tailwind

A second natural and human element of strong indeterminacy in landings in bad weather is a possible sudden tailwind(9) of increased intensity. Sudden changes of wind speed and direction are characteristic of convective weather. Anyone experiencing a storm can attest to this. In the Toronto case, the aircraft was flying 300 ft high when its headwind suddenly transformed into a 10 kn tailwind (10). A BEA report on the overrun of a B747-300 at Paris, France's Charles de Gaulle (CDG) airport, stresses that wind was reported as calm during final approach, whereas a surge generating a 10 kn tailwind was actually recorded during this approach(11).

Furthermore, landing distances are very sensitive to wind conditions. Thus, a 10 kn tailwind increases a 190 t Airbus A340-313's landing distance by around 700 m. Given that the length of Toronto's runway is 2 743 m and that the windless landing distance on contaminated runways is 2 403 m, an extra 700 m is needed due to a tailwind push landing aircraft beyond the runway.

The large uncertainty of the wind brings is also notable in publications on the topic. BEA, in its report on CDG runway overruns, states "a training course defines calm wind as under or equal to 5 kn. The wind levels controllers give pilots during final approaches is averaged over 2 minute periods. The controller only communicates wind speed variations which deviate from the average by more than 10 kn. A 14 kn tailwind could thus be categorised as calm wind. Today's conditions [a CDG accident BEA is analysing] were close to this "(12). Captain P., whom I cited this BEA excerpt to, replied, surprised, that it

was not possible for a 14 kn wind to be "calm wind". He may be right, but the mere fact that experts disagree demonstrates that this element is subject to a fair measure of natural and human uncertainty. According to the Canadian report on the Toronto accident, "the crew got wind speed and direction from the aircraft navigation monitor, which indicated a 15-20 kn, 70-90º [i.e. starboard] crosswind." (13) Shortly after, "the wind changed direction and … the tailwind component rose to 10 kn."(14) BEA concludes "tailwind conditions during approach and landing are not always broadcast.(15)"

The uncertainty related to wind in convective weather is also due to how wind is managed. If a tailwind component suddenly appears on final approach, and assuming that pilots are made aware of it (which, as we have seen, is not always the case), they must quickly review the landing phase – in particular, the landing distance – at a time when their workload is intense. BEA, in the same CDG runway overrun analysis, writes "The crew, which had acknowledged an important tailwind component on initial approach was found not to have taken this component into account in managing the final approach. They attribute this lapse to their workload…"(16)

The complexity of wind is accentuated by an effect known in aviation as wind gradient, or wind shear. This is the sudden change in wind direction that produces strong tailwinds. These, instead of speeding up the aircraft, counteract its lift. Pilots must maintain speed at a level low enough not to increase the landing distance, knowing that a speed too low will cancel the aircraft's bearing pressure if shear occurs. In the Toronto case, there was tailwind but no shear. But we can assume that the crew had the risk of shear in mind.

Diffuse economic pressure

In the field of approaches and landings in very bad weather, several facts lead us to believe there exists diffuse economic pressure, which increases the risk of accidents.

First, there is a tendency to try to land rather than re-engage thrusters and opt to change airports in case of very bad weather. I venture that commercial and economic considerations are not unrelated to this behaviour.

(8) *Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, Incidents en transport aérien,* op.cit.*, p 4.*

(9) *Vent latéral ayant une composante arrière.*

(10) *Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A05H0002, sortie en bout de piste et incendie de l'airbus a340-313 F-GLZQ exploité par Air France, à l'aéroport international de Toronto/Lester B. Pearson (Ontario) le 2 août 2005, p.125.*

(11) *Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, Incidents en transport aérien,* op.cit.*, p 6.*

(12) *Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, Incidents en transport aérien,* op.cit.*, p 6.*

(13) *Bureau de la sécurité des transports du Canada, Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A05H0002, sortie en bout de piste et incendie de l'airbus a340-313 F-GLZQ exploité par Air France, à l'aéroport international de Toronto/Lester B. Pearson (Ontario) le 2 août 2005, p. 5.*

(14) Op.cit., *p. 5.*

(15) *Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, Incidents en transport aérien,* op.cit., *p. 8.*

(16) *Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, Incidents en transport aérien,* op.cit.*, p. 7.*

One fact that illustrates this is provided by MIT research(17), which shows a marked difference in pilot behaviour on entering convective systems, depending on whether the aircraft is en route or in final approach. The difference between the number of storms entered into en route and in final approach is significant. Storms are rated on an ascending intensity scale of 1 to 6. Pilots almost never enter 3-, 4- or 5-intensity storms en route, whereas they enter these hundreds of times in approach. Of 281 flight approaches that entered 3-, 4- or 5-intensity storms, only 10 % were rerouted. The Toronto accident report puts forward as an explanation that avoiding bad weather in final approach is more costly than avoiding bad weather en route as it could result in either an aborted approach or a rerouting. A further element reinforcing this hypothesis is the fact, reported in MIT's survey, that aircraft are more likely to enter bad weather when they are at least 15 mn behind schedule.

Another element related to commercial and economic pressures is fuel management. In case of very bad weather, common sense would suggest that pilots should have all the fuel needed to wait out the storm, attempt to land again, and then opt to reroute with comfortable reserves to another airport in case bad weather conditions persist. But this does not happen. Fuel need we mention – is expensive, and must be saved. This objective can lead pilots, when criteria justifying a change of airports (and hence increased fuel consumption) are not obvious (as is often the case in convective weather), to decide to land at the intended destination. Rerouting may also be risky. The ill-fated Toronto flight crew had decided that, if its approach failed, it would reroute to Ottawa. The minimum fuel required to reach Ottawa is 4.5 t, to which must be added a mandatory final reserve of 2.8 t as a provision for a 30 mn hold above the airport, *i.e.* a total 7.3 t. The plane actually landed in Toronto with 7.63 t of fuel, an amount sufficient for rerouting. However, there is a rule stating, if the fuel on landing is less than 4.2 t (or 1.5 times the required final reserve), the crew must report to air traffic control a *minimum fuel* condition. This announcement does not give priority treatment to the aircraft, but does signal to air traffic control that an emergency might occur if landing of that aircraft were delayed. Procedures state pilots should declare an emergency if fuel is below final fuel reserves (under 2.8 t). So, if the crew had opted for Ottawa, they would have announced a *minimum fuel* condition. And should any slight delay have occurred due to weather or traffic, the crew would have been forced to declare a fuel emergency. Because of fuel management, a rerouting to Ottawa was a far from snug solution. Furthermore, any rerouted flight is

likely to encounter a traffic jam as other similarly redirected flights converge on the backup airport.

Commercial and economic pressures naturally include passenger handling in case of rerouting. The Toronto flight crew's file included a factsheet indicating that an Ottawa-Toronto coach trip, the planned contingency in case of rerouting, would last five hours, a major inconvenience. This five-hour duration had been circled on the factsheet. There is no evidence that this hindered the pilot's decision to fall back on Ottawa, but one can legitimately assume he had this in mind when the decision was made to try and land in Toronto.

Three other factors with commercial and economic dimensions affect landing conditions: the airport's operation (it was not closed), the official landing distance and, finally, the length and other features of the runways.

The airport operator is responsible for shutting down an airport or part of its infrastructure. All interviewed airport officials in Canada, the US and France said they do not expect an airport to be shut down due to wind, rain or storms. Air traffic control's responsibility is solely to ensure runways are free of obstructions. Only specific winter conditions (snow, sleet) warrant the shutdown of one or several runways. The ultimate decision to proceed with an approach and landing lies with the pilot. In a competitive system, it is natural for airports to choose to remain open when weather is convective. A shutdown during storms, wind or heavy rain would place an airport at a competitive disadvantage. Russian airports, less subject to competition and the profit motive (at least until recently), famously tended to close whenever weather was bad. Keeping open an airport in case of convective weather, for economic reasons, increases the propensity to try and land at it. All the more so, since, according to this report, pilots, including those involved here, are under the – mistaken – impression that airports shut down in case of very bad weather, thus signalling by still being open that attempting to land is safe.

As for landing distances, the starting point is the official distance provided by the aircraft manufacturer, known in the industry as *unfactored distance.* This is the landing distance under ideal conditions: a dry runway, no wind, an approach carried out with maximum performance… Manufacturers, in order to sell their aircraft, have an interest in registering the shortest possible unfactored distances. But the registry conditions are different from operational requirements. In practice, longer, usable landing distances, called *factored distances,* are calculated according to real conditions, either by extrapolation or through trials, and by adding safety margins. But unfactored distances, unrealistic and commercially motivated though they may be, are nonetheless an important reference.

(17) D.A. Rhoda et M.L. Pawlak, *An Assessment of Thunderstorm Penetrations and Deviations by Commercial Aircraft in the Terminal Area, Lincoln Laboratory,* Massachusetts Institute of Technology, Lexington, Massachusetts, 3 June 1999.

Contrary to what we might imagine, many if not most runways are not particularly long. Toronto airport's runway 24L, beyond which the accident took place, measures 2 743 m. BEA studied three overruns (18) at CDG runway 08R, whose length is 2 700 m. *"At CDG, in particular, runways normally dedicated to landings are the shortest (2 700 m)"*(19). These distances are fine when the runway is dry or a little wet, and wind conditions favourable. But in the cases of contamination or tailwinds, the difference between required landing distance and actual runway length shrinks considerably. Thus, contaminated with a 5 kn tail wind, a 190 t Airbus A340-313 needs 2 784 m to land (with reverse thrust). This figure is closer to Toronto 24L's 2 743 m and CDG 08R's 2 700 m. Let's now focus on Perigueux, France's runway, which suffered an overrun analysed by BEA(20). Its length is 1 620 m. Whenever there is over 0.25 mm of water on the runway, the landing distance of a Citation rises to 1 445 m. That leaves just 175 m between theoretical full stop and runway end, assuming no tailwind. Furthermore, economic considerations may lead to worsening of runways. On July 17th, 2007, the TAM Airbus A320 airline Congonhas runway overrun resulted in a death toll of 199. The runway was deemed slippery in wet weather, but grooving had been suspended in favour of maintaining traffic. Furthermore, the runway lacks compulsory blast pads.

Economic considerations lead to employing the longer runways exclusively for takeoffs and the shorter ones for landings. Flows may thus be separated; and airports, be more operationally profitable. But this does not help landings in bad weather.

Nonrobustness and weak safety margins

Landing in bad weather suffers from indeterminate natural and economic pressures from which ensue a lack of robustness and the thinnest of safety margins. An excellent example of nonrobustness is the inconsistent reasoning about landing distances between wet and contaminated runways. The landing distance on dry runways is unfactored distance times 5/3 or 1.67 (*i.e.* the unfactored distance is only 60 % of the runway). Wet runways add 15%. But when runways are contaminated, the reasoning changes: contaminated runways trials are conducted and observed landing distances are increased by another 15 %. In other words: when runways are wet, the margin is 82% (67% + 15%) compared to dry runway trials; and when the runway is contaminated, it drops to 15%

compared to those conducted on contaminated runways. Accustomed to comfortable margins of 60% or 82% for dry and wet runways, pilots, suddenly faced with contaminated runways and no more than a 15% margin, become confused. After the Toronto accident, Air France decided to focus its training, on the logical distinction made between wet and contaminated runways margins.

This lack of robustness is illustrated by other facts: the lack of specific procedures dictating calculation of required landing distances depending on weather on arrival (a flaw Air France recently corrected); the many definitions of runway contamination; the reference to runway water levels even though they are not measured (or even measurable), much less communicated to flight crews; the unfounded belief among pilots that an airport might be closed in case of rain, wind or storms; the ongoing debate on inclusion or not in manuals of reverse thrusters and/or braking systems engagement in setting required landing distances; the complexity of the landing distance tables; and the use of braking performance information from the immediately previously landed aircraft, with different features (weight, size); etc.

To cite just one of many recent examples of nonrobustness: the manual in the hands of the crew of the Fokker which, due to melting snow, overran its runway in Canada on November 28th, 2000, indicated landing distances for a variety of weather conditions – compacted snow below 15 °C, compacted snow above 15 °C, packed and sanded snow, snow in patches, wet ice, ice below 10 °C, sanded ice – but none for melting snow (which is surprising for Canadian domestic routes).(21) On the other hand, the manual in the Airbus that crashed in Toronto indicates landing distances for wet snow and slush.

Significantly, there is no standard, simple rule that would allow crews to decide whether to divert in case of very bad weather landing conditions. Yet that is what BEA recommends in its Toronto accident report. *"BEA recommends that civil aviation authorities establish clear standard conditions restricting approaches and landings in convective weather"*(22). Setting such a rule faces a double challenge. Variable indeterminacy is such that any formal rule will stray strongly to the side of caution to cover all possible contingencies, and therefore will set very low thresholds above which the aircraft must reroute. And that is where economics enter the picture: any airline or country that sets very low rerouting thresholds puts

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(18) *Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, Incidents en transport aérien,* op. cit.*, pp. 4-8.*

(19) Op. cit.*, p. 8.*

(20) Op. cit.*, p. 3 et 4.*

(21) *Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A00A0185, sortie en bout de piste du Fokker F-28 C-GKCR exploité par les Lignes aériennes Canadien Régional, à Fredericton (Nouveau-Brunswick), le 28 novembre 2000.*

(22) *Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A05H0002, sortie en bout de piste et incendie de l'Airbus A340-313 F-GLZQ exploité par Air France, à l'aéroport international de Toronto/Lester B. Pearson (Ontario) le 2 août 2005, p.132.*

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itself at a comparative disadvantage. The combination of strong natural uncertainty (unpredictable air and water) and diffuse economic pressures leads to a lack of resolution. Hence the absurdity of, for instance, providing in onboard crew manuals landing distances, depending on real time water levels that are unavailable in real time.

Many facts show, moreover, the razor-thin nature of safety margins. We saw above the landing distance of an Airbus A340-313 left no margin of error between a full stop and the end of the runway on several runways, such as Toronto 24L or CDG 08R, when contaminated. A runway may be slippery, and the estimated landing distance accurate, compared to the actual runway length. But the margin of error is so low any ulterior unfavourable factor is enough to nudge the aircraft beyond the runway: any (however minute) tailwind, a few seconds' delay engaging reverse thrusters, an ever so slightly too high approach, etc. The FAA recommends a 15% safety margin on actual landing distances. But 15% is very little leeway. Test pilots establish landing distances in tests that stress the aircraft to the extreme (even damaging them) in order to minimise braking distances, leading to commercially unrealistic and inapplicable conditions. Moreover, many hazards increase landing distances by an order of magnitude at least equivalent to the 15% safety margin. For example, for an A340-313, a sudden 5 kn tailwind increases the landing distance by 15%; the absence of reverse thrust, by 11% (the FAA recommends landing distances be boosted by 20% in the absence of reverse thrust(23)). An insufficient landing distance because of bad weather caused an accident in Chicago a few months after Toronto. This time, the landing distance had been computed with the presence of snow on the runway acknowledged, but under the assumption of a timely reverse thrust, *i.e.* with no safety margin. The reverse thrust was engaged several seconds late so the runway's length proved inadequate. In the case of the Fokker overrun at Fredericton Airport, there was a 175 m margin distance between the landing distance on wet runways and the runway length. As the runway was not just wet, but covered in slush, 273 m were needed: the aircraft overran the runway.

One can also review the issue of margins by examining the blast pads at the end of runways. International standards warrant a 150-m long, obstruction-free area, at the end of runways. But 150 m, in terms of landing distances in adverse conditions,

especially for the shorter runways, is very little. As a matter of fact, the FAA (which studied 12 years of overruns) found most aircraft overran by 305 m (1 000 ft) or less (the margin the FAA now requires). That is double the 150 m margin.

As BEA pithily remarks its own report on overruns, "These regulatory margins were set to take sundry variables into account and no correspondence with operational realities exists"(24).

The frequency of bad weather landing accidents

In cases of landing in very bad weather, the indeterminacy of natural factors and diffuse economic pressure, with their lack of robustness and of sufficient margins, inevitably result in frequent accidents (relatively speaking, that is: air travel is generally very safe). TSB does not beat around the bush: "TSB Research conducted following this [Toronto] accident has clearly shown that entering convective weather in the final approach and landing phases was a widespread industry practice[…] As a result, approaches and landings accidents caused by convective weather occur regularly throughout the world"(25). National Geographic Channel ("Air Crash") reports 37 runway overruns in 2005, linked to conditions similar to Toronto's accident.

Lists, though not exhaustive, illustrate this trend. TSB cites six cases in companies other than Air France. BEA cites five other cases in its article on runway overruns(26). There are also recent cases: July 17th, 2007, São Paulo(27) (TAM Airbus with a death toll of 199); January 4th, 2008, Deauville (Atlas Blue Boeing 737 overrun); March 3rd, 2008, Hamburg (the wing of a Lufthansa Airbus A320 hits the runway); and September 5th, 2008, Limoges (Ryanair Boeing 737 overrun).

Theoretical musings

Every disaster is the combination of many variables. I propose, however, to distinguish the former according to which of the latter dominate in the outcome. For starters, one can discern *essentially natural disasters*. The indeterminacy of natural phenomena is overwhelming. A typical example is tornadoes. Their appearance is extremely sudden; their path, unpredictable; their power, cataclysmic. Forecasts exist but are inefficient, and protection against wind strength is limited.

(23) Federal Aviation Administration, Safety Alert for Operators, Landing Performance Assessments at Time of Arrival (Turbojets), 31 August 2006, p. 4.

(24) *Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, Incidents en transport aérien,* op.cit., *p. 8.*

(25) *Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A05H0002, sortie en bout de piste et incendie de l'Airbus*

A340-313 F-GLZQ exploité par Air France, à l'aéroport international de Toronto/Lester B. Pearson (Ontario) le 2 août 2005, pp. 89-90.

(26) *Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, Incidents en transport aérien,* op.cit.

(27) Accident worsened by a reversed thrust and the absence of a safety zone at the end of the runway.

Second, one can identify *dominantly technological disasters*. These are Charles Perrow's "accidents"(28). Technological processes are so complex that anticipating every possible outcome is impossible. Inevitably, sooner or later, an unforeseen technical event occurs, with side-effects and cascading, chain reactions that lead to a catastrophe. Some time ago, in the UK a long-haul carrier was forced to land before reaching the runway, because both engines suddenly failed. Engineers do not understand what happened. A bug in the engine management software is suspected. The incident made no victims, but I would have labelled it a dominantly technological disaster, had it not been a near miss.

Dominantly economic disasters are a third category. Interviewed on her contemporary vision of unreliability factors, Karlene Roberts(29), one of the founders of the school of high reliability organisations, enumerated economic factors. For her, organisational savings, so fashionable today, introduce a brittleness in organisations that undermines high reliability: human capital downsizing, training cost-cutting, outsourcing (inter-organisation links are weak points), responsibility-weakening, extreme streamlining, and activity breakdowns into competing units. The train wrecks the UK experienced a few years ago are to my mind typical dominantly economic disasters.

In conclusion, *dominantly organisational disasters* merit mention. An emblematic case is the Challenger shuttle explosion. Interpretations vary. Diane Vaughan(30) sees it as the effect of what she calls a *normalization of deviance*. Christian Morel(31) insists more on the loss of cognitive and teleological cues, which plunge organisations into the absurd. This case could also be studied from the standpoint of Crozierian sociology (the bureaucratic phenomenon, conflicts of interest, vicious circles, etc.). Whatever the approach, the organisation is, here, the architect of its own undoing(32).

Finally, let us return to the cases studied in this article: failed landings in very bad weather bear two dominant factor sets, natural and economic. Nature's influence is central, because wind and precipitation are crucial variables, difficult to determine accurately in real time. But economics is no less important:

rerouting is a costly affair, competition is intense, and runway operating margins are razor-thin.

Organisations faced with dual-dominance catastrophe risk (natural and economic) are subject to a dilemma that is reflected in their behaviour: nonrobust solutions, insufficient wiggle room, partial measures, poorly binding arrangements, etc.

Take for example the decision to either enter a storm front on final approach or reroute. On the one hand, rerouting has a value. A member of the US National Transportation Safety Board (NTSB) said, after an accident in Little Rock, similar to the one in Toronto "We do not want this here" (*i.e.* we do not want to see planes landing in a thunderstorm here). At Air France, the training curriculum prescribes re-engaging thrusters (and, probably rerouting). But on the other hand, we observe the opposite trend of limiting rerouting. An aviation symposium in Ottawa included a working group on fuel economy(33). The unlikelihood of weather-motivated rerouting was estimated at "1 in 4 000 flights" (!), totally at odds with the stance of limiting landings in very bad weather, landings pilots tend to practice too much. Another slide quirkily illustrated this policy on rerouting waffling: first was stated that "fuel economy measures are a necessity" then, second, "safety always comes first".

Another example of this dilemma: whenever a landing accident occurs due to very bad weather, investigators forcefully reiterate, every time, that clear rules must be set limiting attempts to land under these conditions. This type of conclusion is present in the inquest reports on the following landing accidents:

– Little Rock, 1999 (American Airlines). An NTSB member: *"*We really need a buffer zone around storms and standardisation…*"*(34).

– Bangkok, 1999 (Qantas). The Australian Transport Safety Bureau *"r*ecommends all Australian high capacity jet airline operators set up procedures ... ensuring flight crews are properly equipped for approaches and landings on wet and contaminated runways *"*(35).

– Cayenne, 2001 (Air France). *"*BEA recommends that France's Direction Générale de l'Aviation Civile [DGAC] ensures operators' instructions [to their flight crews] to carry out approaches and landings in stormy conditions be sufficiently clear and precise *"*(36).

(28) Charles PERROW, *Normal accidents*, Princeton University Press, Princeton, 1984, 451 p.

(29) "An interview with Karlene Roberts", Interview by Mathilde Bourrier, *European Management Journal*, Vol. 23, N°. 1, February 2005, pp. 93-97

(30) Diane VAUGHAN, *The Challenger Launch Decision*, The University of Chicago Press, Chicago, 1996, 575 p.

(31) Christian MOREL, *Les Décisions absurdes*, Gallimard, Paris, 2002, 309 p.

(32) Voir notamment : Karl E. WEICK, "The collapse of sensemaking in organizations : The Mann Gulf Disaster", *Administrative Science Quaterly*, December 1993, 38, 4, pp 628-652.

(33) Richard SOWDEN, *Atelier sur les mesures opérationnelles visant aux économies de carburant*, Ottawa, 5-6 novembre 2002.

(34) "Inadequate Standardization and Tired Pilots Emerge as Top Issues in Crash Investigation", *Air Safety Week*, site web, 29 October 2001.

(35) Australian Transport Safety Bureau, Investigation Report 199904538, Boeing 747-438, VH-OJH, Bangkok, Thailand, 23 September 1999.

(36) *BEA, Rapport. Incident survenu le 25 mai 2001 sur l'aérodrome de Cayenne-Rochambeau (Guyane) à l'Airbus A340-311 immatriculé F-GLZC exploité par Air France, 25 Mai 2001, 71p.*

A340

AIR FRANCE
OA.NT

Performances Particulières (313)
DECOLLAGE ET ATTERRISSAGE SUR
PISTE CONTAMINEE

TU 04.02.50. 13
25 DEC 03
313

- Tableaux valables pour :
  - . 0 ft d'altitude pression
  - . pour toutes températures ≤ 40°C
  - . vent nul
  - . sans utilisation des inverseurs et sans autobrake.
  - . VAPP = VLS + 5 kt
- **Interpolations** sur masses et épaisseurs **obligatoires.**
- **Extrapolation interdite.**

VOLETS FULL

LONGUEURS DE PISTE NECESSAIRES A L'ATTERRISSAGE (mètres)

ETAT DE LA PISTE			Masse atterrissage (t)							
			130	150	170	190	210	230	250	270
Eau	3 à 6 mm	➤	2060	2160	2350	2690	3010	3320	3620	3890
	13 mm	➤	1980	2010	2180	2470	2760	3050	3330	3730

Neige poudreuse	Neige mouillée	Slush		130	150	170	190	210	230	250	270
15 à 51 mm	4 à 13 mm	2 à 6 mm	➤	1980	2000	2110	2330	2600	2950	3330	3730
-	25 mm	13 mm	➤	1980	2000	2110	2330	2590	2950	3330	3730

Neige tassée ou Glace (✳)		➤	1980	2000	2110	2330	2590	2950	3330	3730

Glace (✳✳)		➤	3350	3540	3810	4220	4640	5000	5300	5590

(✳) Glace avec coeff. frottement > 0,25 ou freinage reporté = MEDIUM ou GOOD

(✳✳)Glace avec coeff. frottement ≤ 0,25 ou freinage reporté = POOR ou UNRELIABLE : Atterrissage INTERDIT sauf cas d'urgence.

CORRECTIONS (%)

Corriger les longueurs nécessaires d'atterrissage des tableaux ci dessus en fonction des conditions suivantes:

VAPP = VLS		- 3 %
Altitude pression aéroport	Par tranche de 1000 ft au-dessus de 0 ft	+ 5 %
Vent arrière (pour 5kt)	Neige tassée	+ 10 %
	Autres contaminants	+ 15 %
Utilisation des 4 inverseurs	Glace	- 26 %
	Autres contaminants	- 10 %

Specific performances. Contaminated runway takeoffs and landings (Air France Operation Manual, December 25, 2003)

– Toronto, 2005 (Air France). TSB "recommends DGAC and other civil aviation authorities establish clear standards limiting approaches and landings in convective weather"(37).

– Chicago, 2005 (US Airline). The FAA issued a safety alert recommending safety margins and standardized procedures.(38)

But today there is still no global standard for accurate, clear and operational restrictions to landings in very bad weather.

Consider the case of dangerous dog attacks. These are accidents rather than disasters, but they are perceived as the latter by public opinion, because of their horrible and repetitive nature. These accidents are also characterised by dual-dominance: natural and economic. On one hand is natural indeterminacy: which breeds truly are dangerous, what mitigating effect dog training has, what rouses dogs, etc. To effectively check this indeterminacy, many major restrictions appear to be required (prohibition of many breeds, compulsory training and licenses). On the other hand is economic pressure, in consumerist form: owners are reluctant to accept curbs on their choices. This tension shapes collective behav-iour: adopted measures are flawed and ineffective; professional dog breeders issue conflicting statements; every drama produces reactions, until the froth fades…

Coming back to landings in very bad weather, one may ponder how this topic will evolve: the issue will obviously not go away; storms and rain will not stop; and air traffic tends to increase. To allay the tension between the two dimensions of the issue – natural indeterminacy and economic pressure –, something has to give. Technical solutions can address natural indeterminacy. Standardized friction coefficients could be defined, and measured in real time on each runway: we have the technology. Contamination could be objectively measured. Landing distances – for every individual aircraft – could then be computed, based on actual contamination coefficients. Blast pads could be fitted with braking systems, similar to those designed for trucks at the bottom of steep gradients (on loose soil in which wheels sink). Some runways are already thus equipped and these systems have been of use in overruns. A check on economic pressure, to overcome competition concerns, could take some form of international governance. Indeed, the aforementioned technical solutions are viable only if all airports and airlines comply with them, because non-compliance brings a competitive advantage, cost- and trade-wise (less regulation, less infrastructure, less rerouting). This can only be steered by the International Civil Aviation Organisation. ■

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(37) *Bureau de la sécurité des transports du Canada, Rapport d'enquête aéronautique A05H0002, sortie en bout de piste et incendie de l'Airbus A340-313 F-GLZQ, exploité par Air France, à l'aéroport international de Toronto/Lester B. Pearson (Ontario), 2 août 2005, p. 132.*

(38) Federal Aviation Administration, Safety Alert for Operators, Landing Performance Assessments at Time of Arrival (Turbojets), 31 August 2006, 11p.

WOMEN, AN OBJECT OF INNOVATION

Specialists of innovation usually talk about computers, automobiles, aeronautics, medicine or biotechnology. There was no book on innovations in techniques related to women and their bodies(1). Teresa Riordan, a science journalist specialized in the study of patents (for *The New York Times* in particular), has taken up the challenge of writing the missing book(2). The result is a gripping surprise with an original, offbeat view of innovation, its nature and processes.

By **Hervé DUMEZ**, Centre de Recherche en Gestion, École Polytechnique, Paris*

WHILE READING

INNOVATIONS FOR WOMEN

From 1850 to 1950, the period covered by Riordan's book, 1% of patents filed in the United States were connected with women's bodies. Feminists would like to interpret this figure as the effect of an all too familiar masculine domination. However things are apparently more complicated – or subtle? Women filed the majority of these patents, and even two-thirds of the patents for providing support to the bosom.

The catalog of inventions for women is unbelievable: devices resembling mechanical stencils for putting on lipstick without smearing (Figure 1); the dogged quest to produce crinoline with metal joints for keeping a dress belled out while allowing the wearer to sit (Figure 2); the trial-and-error advances leading to the development of the lipstick tube with a screw-on top (Figure 4); suction discs for enlarging and shaping the breasts; the cor-

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Figure 1 : Device for putting on lipstick without smearing

set, which, advertized as "electric" (in fact, magnetic), was sold with a magnetized needle; etc. All sorts of techniques were put to use, in particular electricity and radioactivity, which, recently discovered and industrialized but not yet recognized as dangerous, was used for hair removal. Why all this activity?

The female body has been the object of many an innovation, we might say "part by part": eyes, breasts, hips, skin, fingernails and so forth. This is the outline used by Riordan who unswervingly pursues the topic of patents, techniques and inventions. She formulates, as though in passing, a single hypothesis: might women have been trying to respond to men's predilection for novelty by looking for ways to continually reinvent themselves? Whatever the answer, the market for innovations connected with women has been a goldmine. Cosmetics were one of the few categories of products with increasing sales during the Great Depression. An estimated fifteen

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(1) Historians usually approach feminine beauty, and its changing canons, from the angle of the history of mentalities. See Georges VIGARELLO, *Histoire de la beauté. Le corps et l'art d'embellir de la Renaissance à nos jour*s, Paris, Éditions du Seuil, 2004.

(2) Teresa RIORDAN, *Inventing beauty*, New York, Broadway Books, 308p., 2004. We thank the author for permission to publish the illustrations from US patent records or advertisements with the French version of this article.

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Figure 2 : Patent for crinoline that makes it easy to sit down.

thousand sorts of nail polish are now circulating. It is easy to understand why L'Oréal and its owners have became rich. Two out of the many innovations listed in Riordan's book will be retained herein: cosmetics (specifically mascara) and the epoch-marking switch from the corset to the bra.

MASCARA

Mascara was used in ancient times, especially by Egyptians. This product has to be liquid enough for easy application, but has to dry without hardening and be relatively waterproof (from tears or rain). Petroleum byproducts satisfying these tricky technical requirements were not invented till the 1950s and 1960s. Esso, with an eye on the growing cosmetics market, filed several patents related to mascara. In this field as in others however, technology is but one aspect of innovation.

Besides the purely chemical properties of the products used, other factors – the ease of applying and carrying mascara – played a key role in developing this product. Packaging was decisive. The small bottle of nail polish with a brush can be traced directly back to the way glue was packaged during the 19th century (Figure 5). In contrast, the small pen-shaped bottle for mascara with what Americans call a "wand" in the cap comes from the shoe varnish bottle through a process of trial-and-error (Figure 3). Some manufac-

turers had, unsuccessfully, tried to replace the wand with a tiny sponge.

Another technical problem cropped up. Women needed a mirror to put on makeup. Till the late 19th century, mirrors were scarce. They were kept at home, hung above fireplaces or on bedroom closets. During the 1890s, big American companies (notably Coca Cola) distributed small pocket mirrors marked with their advertisements to women for free. Women were now able to make up their faces at any time and in any place. An innovation also has social aspects. The 19th-century associated makeup with women of loose morals. It took time to change this. The major phases were: the spread of photography (with its strong contrasts); the Diaghilev Ballet's staging of *Sheherazade* in London in 1909, which sparked an explosion in mascara sales to high society; Paul Poiret, the couturier who made this

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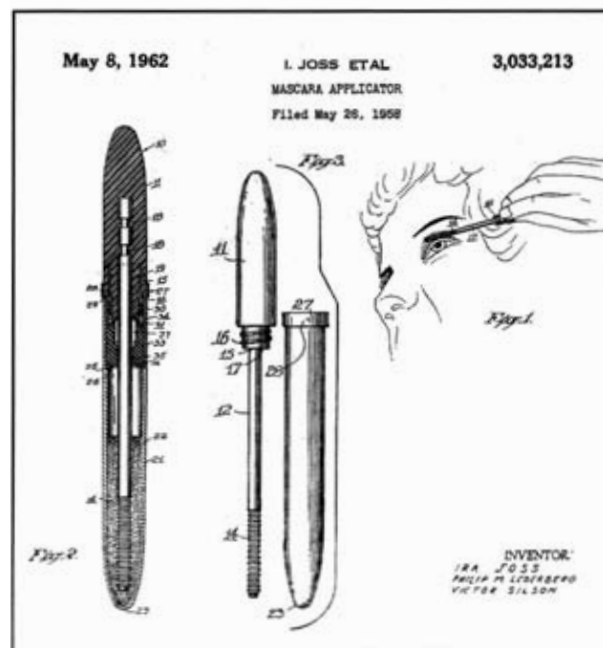
Figure 3 : The mascara wand derived from the shoe varnish bottle

product fashionable in Parisian society; and, finally, Greta Garbo who popularized mascara. According to a 1936 survey of American male students in *Vogue*, 100% of them disapproved of wearing makeup. The magazine concluded: they want to be tricked by beauty but do not want to be aware of the trickery. This conclusion was right: the same year, *Woman's home companion*, carrying out the same survey but with American women, found that 62% of them regularly used mascara (their favorite brand: Maybelline). The history of mascara does not stop at this point.

On the morning of 17 May 1933 – in the depths of the Great Depression – Mrs. Brown (Her real name has never been disclosed) went to the beauty parlor. After a permanent, she had her eyelids and brows
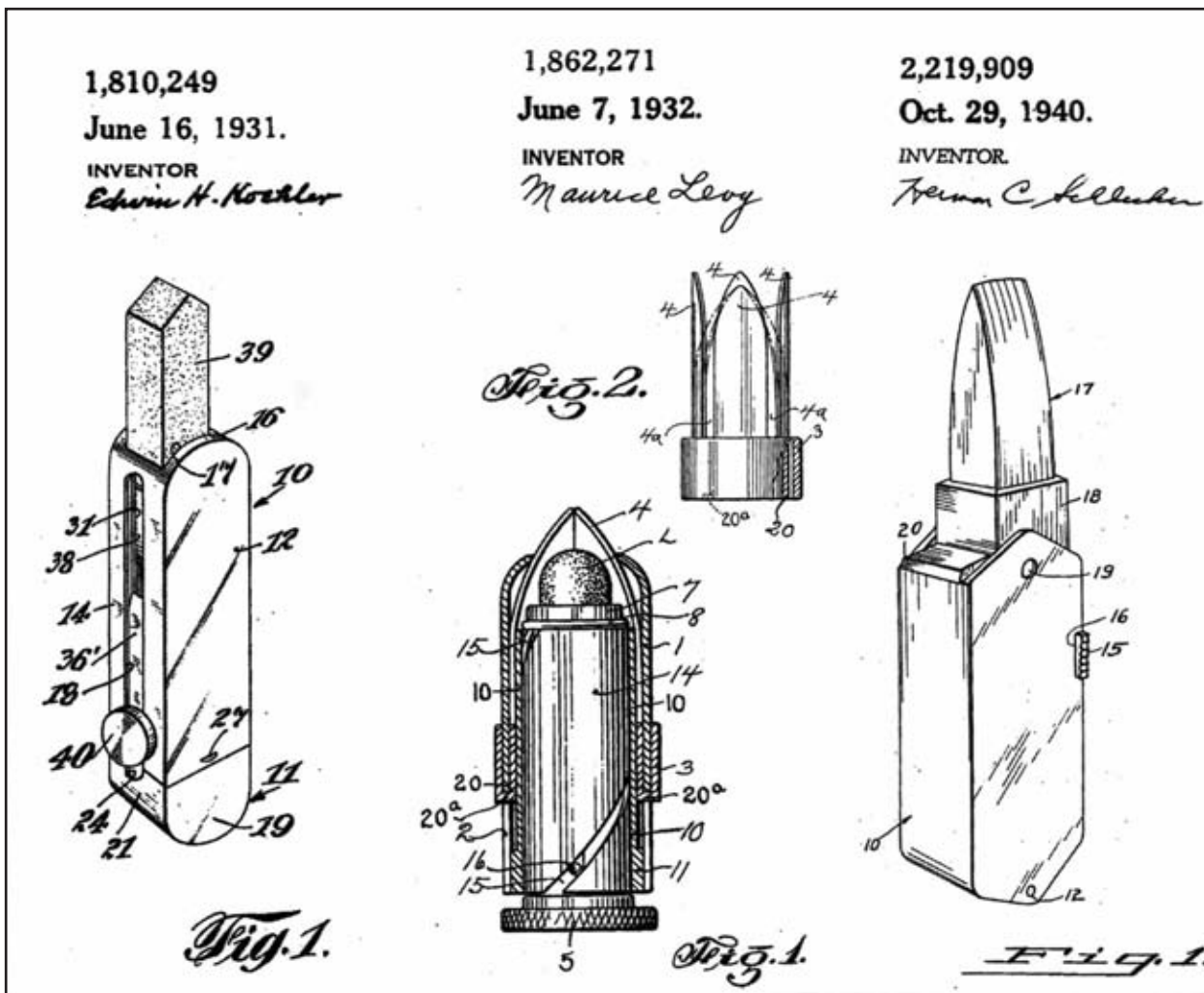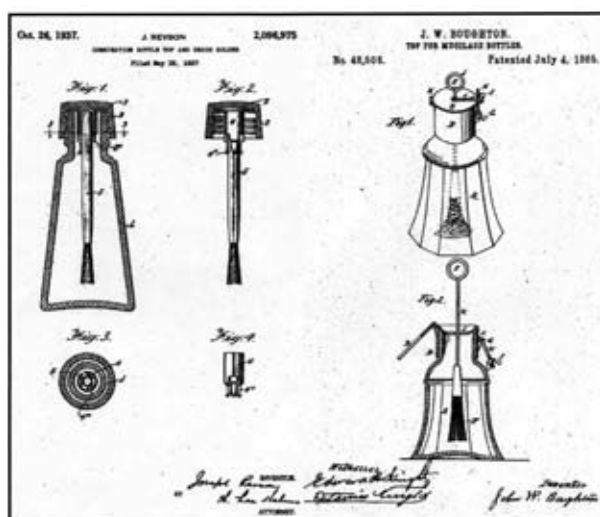
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Figure 4 : Trial-and-error advances leading to the lipstick tube.

done up with mascara. That evening, she had to give a lecture to the PTA in her small Midwest town. During the lecture, she felt the first symptoms and, by the next morning, had lost the use of both eyes. The mascara made by Lash Lure (a pharmaceutical laboratory in Los Angeles) was a product mainly used to dye hair. Its danger as a dye would not be discovered till much later; but bringing it in contact with the eyes had a tragic, immediate effect. It took Congress five years before deciding in 1938 to adapt regulations about drugs to cosmetics. Newspapers had previously reported cases of blindness caused by Lash Lure mascara. What is amazing is that American women continued using the product for so long and that imitators of Lash Lure went on selling their own mascara despite increasingly confirmed suspicions.

The history of mascara draws our attention to several points: the pace of scientific and technical innovations, the importance of packaging, the social aspects of an innovation related, in particular, to the force of images (photography, movies) and regulations. The switch from the corset to the bra is even more complicated.

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Figure 5 : The packaging for glue was used for fingernail polish.

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Figure 6 : The search to improve the corset.

HERVÉ DUMEZ

W. KOPS.
BRASSIÈRE.

1,237,059.

Fig.2

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Figure 7 :   The slow invention of bras: the first brassieres with straps covered both breasts instead of each separately.

FROM THE CORSET TO THE BRA

The 19th century was the age of the corset, an object with two technical functions. The one was related to a physical constant, perhaps the most important and most stable in human history: 0,70. Whether contemplating Marilyn Monroe or the Venus de Milo, a beautiful woman's waistline should equal 70% of the width of her hips. As an exhaustive study shows, corsets were intended to reach this constant: the average was precisely 0,72. Secondly, corsets served to lift the breasts from the bottom upwards. This allowed for low-cut dresses that bared the shoulders and top of the breasts, an appreciated quality in 19th-century gowns. The teenage hero in Balzac's *Lys dans la vallée* felt dizzy from looking at Madame de Mortsauf's shoulders. Technical improvements were made in the corset throughout the 19th century. The very expensive whalebone was gradually replaced with flexible metallic bones. Rubber was increasingly used to make corsets less rigid, and this opened the way toward the *corset gant*, which, it was claimed, fit the body better. Of special importance were the metallic eyelets for tightening the laces in order to reach the dreamed-of constant, even for bodies quite far from it. More than a thousand improvements in the corset were patented in the United States from 1870 to 1900 (Figure 6).

Everything changed in women's lives around 1900. Sports came into vogue: bicycles, in particular, but also swimming, tennis and golf among the well-to-do. A dancing fad swept over America between 1910 and 1920, and dance steps became freer. Masses of women were going to work. The generalization of the automobile signaled sexual liberation. In Middletown, a famous sociological study conducted in a small American town, nineteen out of the thirty girls appearing in juvenile court for sexual misconduct had been caught in the act in a car.(3) At the time, the United States counted fifteen and a half million motor vehicles. While courting Nora (the source of the character Molly Bloom), James Joyce begged her not to wear a corset. In an ardent letter, he wrote that he did not like the feeling of embracing a mailbox.

A technical problem metaphorically corseted the relation between hips, torso and breasts: how to hold up a woman's breasts without impeding her movements? Girls and young women wanted to take up sports or dance. Since this trend started in a peripheral market segment, the corset industry reacted belatedly. Nonetheless approximately fifty corset-makers in the United States were proposing products designed for dancing and other sports by 1920.

The race toward innovation was on. A rival product emerged: the brassiere (Figure 7)(4), a word used in *Vogue* in 1904(5). The product's technical definition was vague. The new elastic fibers used for bandages were put to a new use: providing support for the breasts while making it easier to move more freely. Many brassieres did not have shoulder straps. Most supported the breasts by applying pressure on them and flattening them.

Who caused what? It is hard to say. In any case, the trend of young women wearing brassieres in the 1920s coincided exactly with the tomboy fad with its emphasis on a

(3) Robert LYND & Helen MERREL LYND, *Middletown, a study in contemporary American culture*, New York: Harcourt & Brace, 1929.

(4) In French, brassière originally referred to the part of a suit of armor in contact with the arms *(bras)*. This sense of the word was already antiquated by the 15th century, the referent having shifted to clothing, specifically a sort of woman's blouse with sleeves (1341). This meaning was widespread in the 17th century, until the word came to refer a small upper garment with sleeves worn by nurslings (1843). The plural, brassières, used to refer to leather or cloth straps passed around the arms for carrying a load (1838). English adopted a similar meaning to refer to what is called a *soutien-gorge* in French. Alain REY, *Dictionnaire historique de la langue française*, Paris: Le Robert, vol. I, p. 283, 1994.

(5) In French too, the word for referring to a bra, *soutien-gorge*, appeared in 1904. But its etymology is quite different's from *brassière*'s. The plural *soutiens* referred to a piece of female lingerie for supporting *(soutenir)* parts of the body. The compound word *soutien-gorge* was used in 1904 to refer to the undergarment that lent support to a woman's breasts and could give them a deceitful appearance, whence popular phrases such as *menteur comme un soutien-gorge* (a liar like a bra) used by Céline in 1936. Alain REY, *Dictionnaire historique de la langue française*, Paris, Le Robert, vol. II, p. 1999. The history of this product parted ways in France and the United States; but in both lands, the word came into being before the product had been fully developed.

flat profile. This fad soon passed, but the technical problem remained: how to lift the breasts while making it easier to move now that the aesthetic canon had changed from an emphasis on flattening the profile to enhancing it?

The race toward innovation was relaunched. Between 1918 and 1929, two hundred patents were filed in the United States, 21 of them by a single company, Kops Brothers. Most of these were fake innovations. But we do notice among them the brassiere with cups for setting off the breasts and the brassiere with straps. Finding the technical solution took about thirty years. Having devoted a million dollars in R&D, Warner

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Figure 8 : Warner filed the decisive patent in 1950: two separate cups – a break with the corset – supported by elastic, adjustable shoulder straps with an adjustable band with a hook in the back for fastening.

agers shortened "brassiere" to "bra". Warner was the first to orient its advertisements for brassieres toward the adolescent market. Brassieres came to be widely worn during WW II for two reasons. For one thing, women were working. Lockheed, for example, required that brassieres be worn in its plants for decency's sake… and to reduce fatigue and the risk of accidents. Given the shortage of (male) manpower, wearing a bra contributed to the war effort by speeding up the pace of work. For another, there were shortages. Since the arms industry consumed huge quantities of iron and rubber, wearing a bra was to be favored since it took much

filed the decisive patent in 1950 (Figure 8). The object could, at that point, be defined in precise technical terms: two separate cups – a break with the corset – supported by elastic, adjustable shoulder straps with an adjustable band with a hook in the back for fastening (Corset-like underwires were optional).

Two other factors were essential in attaining this apparently simple but quite sophisticated result. The first was the chemical industry's development of latex, a light-weight, washable, resilient substance with another interesting property: it would wear out. Cheaper to buy than a corset, the brassiere was a growth market since a woman would, during her lifetime, buy four times more brassieres than she would have corsets. The brassiere was modern since the act of purchasing was to be repeated. The second factor was the standardization of sizes. Camp Company in Jackson, Michigan, which advertized its scientific approach to women's lingerie, invented the A, B, C and D sizes, which make men swoon. Competitors proposed other classifications that, in its infinite wisdom, history did not retain.

The corset was gradually abandoned during the 1920s and 1930s, in particular by the young. In 1934, teen-

more of these precious raw materials to make a corset. The War Production Board set the maximal quantity of elastic for the straps at 2,5 square inches, and the quantity for the cups at 6-8.

After the war, companies innovated in the padding. Pads, at first separate for placing inside the cups, were gradually incorporated in the brassiere itself (Figure 9). "Falsies" shaped the breasts like live shells, a well-known form from the war. They were used till the early 1960s, when the chemical industry progressed to the point of offering silicon implants.

In the meantime, the traditional corset industry was trying to take a fresh breath thanks to girdles, a new phase in the evolution of the corset.

ON INNOVATION

The study of the patents filed in relation to the female body places our perceptions of innovation in perspective. Is innovation more intense today than during the period from 1850 to 1950? Is it more scientific? The comparison of these two periods sug-

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Figure 9 : Pads, at first separate for placing inside the cups, were gradually incorporated in the brassiere itself. "Falsies" shaped the breasts like live shells, a well-known form from the war.

gests, paradoxically, that innovations, today like yesteryear, rely on an odd mixture of science, technology and trial-and-error. Is the dialog between innovators and their public or market more elaborate today than it was back then? We are told that the teenage market is a very recent discovery. Once again, perceptions must be set in perspective. The invention of the bra was a technical and commercial response to the changing needs of teenagers at the turn of the 20th century.

By standing back to take a historical view, we come to see how diverse, heterogenous and multidimensional innovation is: the importance of pictures in techniques (photography, cinema) and in people's imaginations; the advances made in science and marketing; changing mentalities; the complex interactions between social strata (After the Diaghilev Ballet, makeup signaled belonging to high society instead of the demi-monde); regulations; standardization… it all interacts.

An anecdote will serve as a last example. Everyone is familiar with Ford's statement that customers "can have any color they want so long as it's black". Unlike what we might suppose, this statement was not a symptom of autism with regard to consumers. Instead, it referred to a technical problem. At the time, black lacquer dried much faster than other colors, whence a faster pace on assembly lines, which was Ford's objective. In 1923, Dupont developed a fast-drying colored paint in response to a request from General Motors, which immediately used it for its cars and won a decisive competitive advantage over Ford. Prospecting for other markets, Dupont found pianos, golf and pool balls, and a more promising one: nail polish. Before it would be widely used, nail polish had to await another technical and social innovation, namely the electric hair-dryer. While women were spending time under a dryer at the hairdresser's, their hands were idle; and hairdressers could propose a manicure… and nail polish became popular. ∎

EGYPT AND THE EXPERTS

Reading Timothy MITCHELL's abrasive *Rule of experts: Egypt, techno-politics, modernity* forces us to change our way of looking at development policies, experts from international organizations, the social sciences, Egypt's history following independence… Everything is interrelated; nothing is neutral. Mosquitos are more dangerous than tanks; the system of land tenure is a war machine; cartography underlies the economy; the CIA manipulates anthropology; "Egyptian peasants" have been invented simply to justify the West's "mission" in the Mid-East. To obtain a clearer view, we must decompartmentalize the social sciences and draw the natural sphere closer to the social one, and technology closer to politics

By **Michel CALLON,** Professor at ENSMP

« Capitalism has no singular logic, no essence. It survives parasitically … taking up residence in human bodies and minds, or in sugar cane or private property, drawing its energies from the chemistry of others, its forces from other fields, its momentum from other's desires » (p. 303)

According to Tocqueville, the best way to understand a country is to visit its colonies. Timothy MITCHELL's *Rule of experts: Egypt, techno-politics, modernity*(1) convinces us that the best strategy for studying globalization is to concentrate on countries like Egypt, where the forces organizing the world economy are facing off. This interesting book is deeply original owing to its unusual way of wending through the social sciences. It never bores the reader senseless with abstract, theoretical ruminations. Nor does it ever lapse into anecdotes or a positivistic empiricism. Given its structure, the sites chosen for investigation and its attention to the credentials of the parties whose analyses of their own actions are presented, this book makes a unique history com-

prehensible and endows it with far-reaching significance.

To preserve this originality, I have chosen to review *Rule of experts* so as to describe as faithfully as possible its argumentation. Though sticking to the order of the chapters, my review(2) will not be linear as it follows the author's itinerary zigzagging through time and space. Not the least of the merits of this book is its focus on the role and impact of the social sciences. The first part leads us to discover Egypt's recent history by following three unusual guides: mosquitoes, land reform and the mapping of the country's surface area. These guides let us glimpse the forces that enter into the building of a society and economy.

THE MOSQUITO CALAMITY

"Can the mosquito speak?", the first chapter, thrusts us in the midst of a strange war in 1942. Foes abound.

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(1) Timothy MITCHELL, *Rule of experts: Egypt, techno-politics, modernity*, Berkeley and Los Angeles, University of California Press, 2002.

(2) Published in French in the December 2006 issue of *Gérer & Comprendre*, an earlier version having been printed in *Libellio d'AEGIS*, n° 2, February 2006.

Rommel's tanks have swept into Egypt but are soon vanquished thanks to the incredible mobilization of allied forces. However the tanks, which are definite targets that can be destroyed once and for all, are not the most dangerous. The real foes are weaving ties and setting off chain reactions that sap the country's vitality.

Take the example of the dikes and dams that Egypt was busily building during the years before WW II. By opening new areas for farming and attenuating the fertilization of the soil by the Nile, these projects made the country dependant on chemical fertilizers. By boosting cotton and sugar cane, which partly replaced food crops and necessitated chemical fertilizers, they intensified this dependence. This is the war's point of incidence, one unrelated to the easy target of tanks to be blown up.

The ammonium nitrate used for fertilizer was the main raw material for making explosives. Mobilized by the war effort, the chemical industry, especially in the United States, no longer supplied fertilizer. Famine set in. Since trouble never travels alone, *Anopheles gambiae*, a mosquito transmitting the malaria pathogen *(Treponema Plasmodium falciparum)*, chose to attack the country at that very moment owing to an unexpected combination of circumstances. The entry of Japanese troops into Java interrupted exports of quinine and caused a shortage of the malaria drug. The situation was ripe for the mosquito and its larvae to colonize Egypt by setting up headquarters in the south and menacing the north. By itself, the mosquito would not have pushed the country over the cliff, but Egypt was already weak and sick. The mosquito fed on this weakness, thus setting off chain reactions that would further weaken the country and spark a political crisis. The larvae started proliferating in sugarcane fields, a breeding ground for it throughout the south – this being a distant outcome of the big hydraulic programs. The sap from the cane, consumed by those who harvested the sugar, made their bodies more hospitable to the malaria parasite. Thanks to recent improvements in transportation, things and people were moving faster. Egypt, after escaping the tanks, was losing its strength bite by mosquito bite.

This sociotechnical complexity no longer surprises social scientists. We now know that humans and nonhumans weave relations with each other and that we cannot, therefore, *a priori* separate social forces or causes from natural ones. The combination of the two explains Egypt's unwitting plunge over the cliff. Politicians and experts isolated the foe (the mosquito and its larvae) and fought it as if it were independent of the other forces with which it was allied or on which it played. The modern machinery of "expertise" was set in motion. For it, problems are technical in nature and are to be solved technically, from a distance. This deepened the crisis.

However, many voices were raised contending that public health problems were, in the main, political problems and that the key question was land reform. Some even claimed that Egypt was caught between rich mosquitoes in the north and plain mosquitoes in the south. Experts, however, cannot be stopped once set in motion, especially not while US aid policy was moving in the same direction. Since there was a farm crisis, farming was to be improved; and fertilizers, spread by helicopter and through other state-of-the-art techniques. Since there was a health crisis, a building program was to be launched that used efficient brick-making techniques. Since there was an epidemic, campaigns for spraying DDT were to be carried out. Underlying these big, modernistic programs were the assumptions that the forces assailing Egypt were independent and that techniques were separate from politics. All these programs failed. Enemy forces formed alliances and interacted in unexpected ways, whence unpredictable problems. One from among a hundred other examples: the DDT used to eradicate mosquitoes was made from the ethyl alcohol produced by the very industry that was also using the sugarcane with the sap that helped the mosquitoes to breed!

By refusing to recognize these interrelations, by seeing the fight against mosquitoes like the battle against tanks, decision-makers and experts reinforced the interrelations between multiple factors, thus making it harder to manage them. Whoever wants to write this history must take into account not only the interventions by experts and policymakers but also the interrelations between the forces to be fought. The experts overlooked these interrelations, since they considered these forces to be independent. The social sciences would err in darkness if they remained blind to these sociotechnical patterns and separated, like the experts and decision-makers, the social from the natural sphere. Mosquitoes are as important as the war for anyone who wants to understand the Egyptian crisis. In other words, it is the coincidence between the two that accounts for this crisis. We must bring the work done by experts into the picture in order to understand this weird situation. As full-fledged players in the crisis – on par with the mosquitoes – their work lent force to the very foe against which they were fighting, because they took the mosquito to be a natural force outside the social sphere and incapable of interfering with it.

LAND REFORM

As this mosquito attack shows us, the configuration of forces explaining why certain events happen and why a certain momentum prevails is always unique. Although history never repeats itself, an article of faith in modernism states the very opposite, namely:

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problems resemble each other and are to be handled in the same or nearly same way in all places at all times. This serves as the starting point for the second chapter, "Principles true in every country".

The issue of private property, which the West has embodied in a universal principle or law, perfectly illustrates this conviction. For Westerners, private property is the cornerstone of civilization, a shield against the arbitrariness of powers-that-be (in particular the power of the government). A person is what he/she owns. We see why development policies have always, by and large, been associated with programs for imposing private property. Colonization can be interpreted as the often violent history of the setting up of a legal framework that recognized private property and provided for its defense and the possibility of transferring ownership rights.

This rhetoric is grounded on the postulate that property did not exist before the West invented and… imposed it. This postulate, we know, usually turns out to be false, and is false in the Egyptian case! As a review of history shows, the law on property, especially under the Ottoman Empire, had complicated refinements of the sort that Anglo-Saxon law had introduced into Roman law, which was a shining example due to its brutality and reductionistic simplicity. The ownership of, for instance, a piece of land did not generally entail an absolute right to the land and its produce. Mitchell has shown how complex, subtle and, we might say, modern this field of law was that created the conditions for more efficiency and justice. We might think we are reading the well-known definition given by Sir Henry Maine in the mid-19th century about property being a "bundle of rights". The property rights imposed by colonial authorities did not exist in a vacuum; they destroyed and replaced institutions that were filled with intelligence.

Under these conditions, the recourse to force and violence comes as no surprise. The reason that Western property rights in their most brutal and stupid form (one thing = one owner) was such an important issue in Egypt is that sugar cane and cotton were the first experiments worldwide in industrial farming. Since the farmers did not consume these crops, force was to be exerted on them. In this respect, slavery was a key innovation. Populations had to be deported; and a nearly military discipline, brought to bear to keep rural-dwellers in place. In short, the situation called for what Foucault has described as a "government of populations". The whole legislative, legal and police system was devised and used to prevent rebellions and desertions. Property rights came to carry weight. Mitchell has provided a luxury of details about these episodes, for example, how the revolts of Indian peasants against the British spread to Egypt, where prisons were soon overflowing.

"Desertion of the land and armed rebellion were not the only problems the new agriculture faced. The extensive irrigation works required by industrial crops brought two additional forces into play: disease and debt" (p. 65). Debt "was to provide a mechanism that would lever into place the new law of property, and with it the colonial occupation" (p. 66), a point recently confirmed by Julia ELYACHAR's work on microcredit. A system where peasants keep working to pay off their debts has unequaled efficiency. It turns political protest into a list of individual grievances, while the insolvency of smallholders who have received loans serves as the grounds for distraints and expropriations. The advantage of large landholdings – and of owners to whom the government delegates the power to collect taxes – has nothing to do with higher productivity but, instead, with their effectiveness as a means for "fixing" the rural population. Before "fixing" the economy – turning it into a stable, manipulable, controllable object – the population has to be stabilized. This establishes the distribution characteristic of modern Western societies: for the state, the *imperium* of power over people; and for private landlords and proprietors, the *dominium* of absolute power over things. Like any major form of distribution, this one also feeds on interrelations of all sorts. Big landlords are literally private despots who design and build model villages, and supervise farmers' everyday activities. Something resembling a labor market gradually emerges. Labor becomes mobile and can be mobilized since it has already been stabilized.

This metamorphosis, as Mitchell has emphasized, cannot be described as the state taking over rural society, since these two players are created at the same time. It is, therefore, hopeless to interpret the origins of private property rights as the painful but necessary application of a general principle imported from abroad – from "civilized countries". As in any performative procedure, the declaration of these origins is itself part of the process: "Presenting the law of property as a conceptual structure whose origins lie outside actuality is part of a process that establishes the law in terms of this dualism" (p. 77). The new legal order does not free people from arbitrariness. Instead, it consolidates and, at the same time, modifies an arbitrary distribution of power. "The new legal order, rather than ending exceptional forms of control, created a thousand arbitrary powers" (p. 77). The idea of landed property played a key role in this dynamic concentration of powers. Modern Egypt thus took shape as a territorial and political unit, and a governable object. If our objective is to destabilize these dualisms, "then a critique that rests on a dialectical logic, however powerful, cannot serve" (p. 79). The law tells space apart from property, and then property apart from owner. Any dialectical analysis that adopts these categories is a part in the continuance of this performativity.

HOW EGYPT WAS MEASURED AND MAPPED

Land ownership could not have been established without investments in methods for measuring, surveying and mapping the land. This is the subject of the third chapter, "The character of calculability", where Mitchell has fleshed out the argument that the economy, as an autonomous reality and as a subject of

tinuing this experimentation and research under real conditions.

A driving force in making this new national economy, as Mitchell has shown, was the mapping, surveying and registering of the land. In 1909, the Khedival Society of Political Economy, Statistics and Legislation proposed a survey of landed property. For the first time, systematic statistics demarcated the national territory as a calculable space, thus bringing
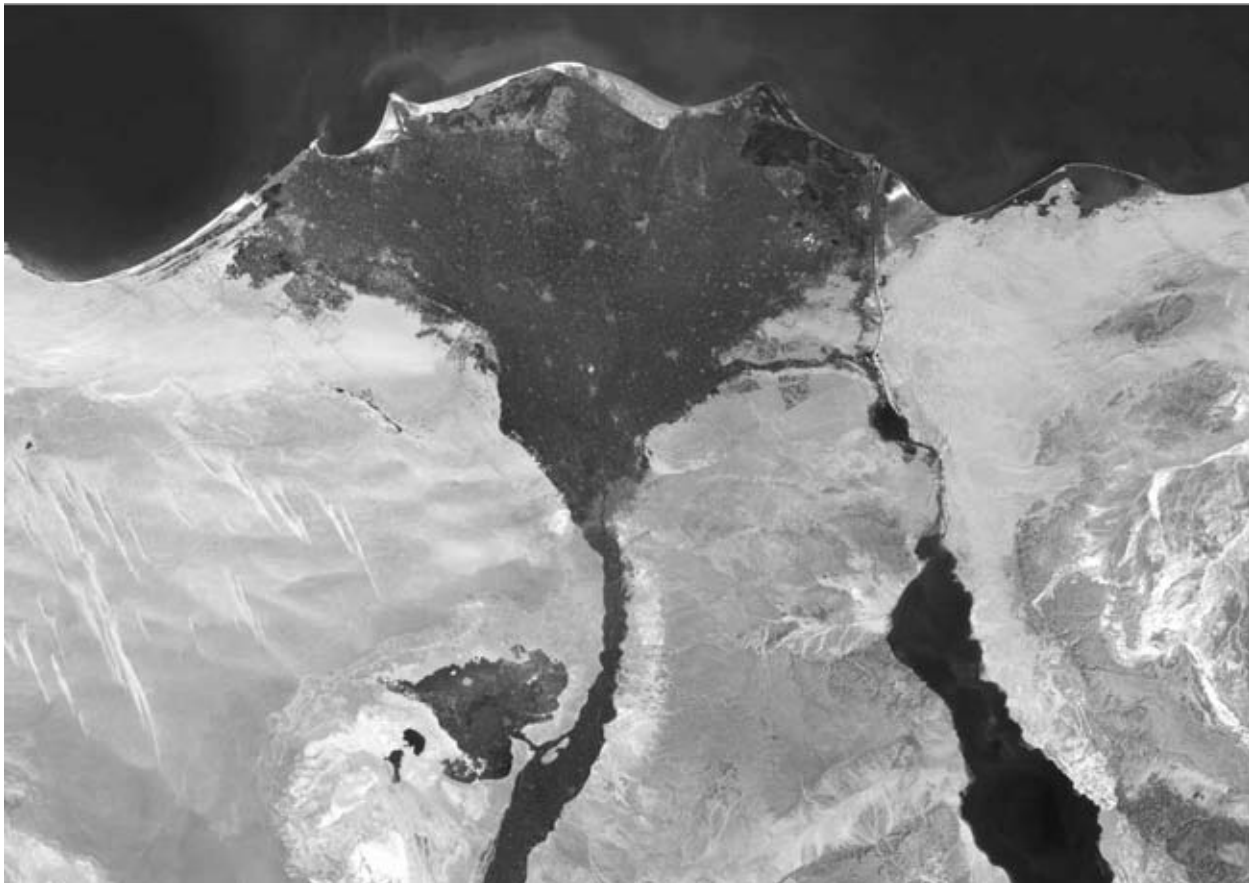
Planet Observer/Hoa Qui/ EYEDEA

We hold a stereotype of Egypt, one repeated by specialists, as a narrow stretch of inhabitable land fertilized by the Nile overflowing its banks and depositing alluvium, where soaring population growth is making the situation worse.

knowledge and interventions (in particular, political interventions) – what I call the economy-as-a-thing hereafter – is a recent creation. He has dated it back to KEYNES's *Indian currency and finance* (1913), a book, not well known in France, that took part in the great debate about whether or not the Indian and British economies were distinct from each other. Keynes provided an accurate, operational definition of a national economy, an old idea at the center of a controversy between List and Marx. He proposed restructuring imperial powers so as to provide them with new means of intervention. India was one of the first laboratories for working out and applying these theories, but not the only one. Egypt, where the French and British imperial powers were facing off behind closed doors, was an opportunity for con-

to light the relations between people and the land, and giving substance to the idea of landed property. Within ten years, more than twenty thousand maps were drawn, describing all farmlands, plot by plot. Cadastral maps had existed for a long time, but these new ones were based on precise land measures made by triangulation. They also contained information about owners and taxes. They had four advantages over the previous maps. First of all, they indicated the positions of land parcels and brought to light previously invisible information about, for example, untaxed plots. They fostered the idea of the nation as a space. Secondly, they recorded the coexistence of what was normal and abnormal by treating big and small holdings alike. Thirdly, the knowledge they provided could be put to use locally, as tax collectors took

measurements from these maps instead of surveying the land. Finally, owing to both their accuracy and focalization on certain problems and pieces of information, these new maps provided a substratum where the economy could take shape.

The economy-as-a-thing thus came into being. It finally had the solid foundation necessary for its establishment: "The map helped to constitute and consolidate the new institution of private property and the form of debt, title, dispossession and violence on which it depended" (p. 93). Other changes, made possible or easier thanks to the land surveys and maps, helped consolidate the economy-as-a-thing: private ownership of the land, the development of incorporated companies and the calculations having to do with cotton (Egypt's main "economic" product). To this list should be added: the semi-public institutions set up for major projects; the sudden, rapid growth of metropolitan areas, which, according to Georg Simmel,(3) provided a space and framework for the monetary economy; and of course, the introduction of a single national currency. This movement of objectivation was amplified by Egypt's status as a colony, designed as a self-contained reality. Separate from the rest of the world, it could be manipulated from afar and handled like a "case" with problems to be measured, analyzed and treated by applying knowledge and knowhow from the outside. The circulation of statistics increased the rift between the subject of these statistics and the ideas formed about it.

This making of a calculable subject of study ran up against enormous difficulties: inexact figures, the creation of a category of the population that could not be brought into the statistical picture because it did not own land, the impossibility of monitoring the movements of people and merchandise, etc. These imperfections and shortcomings sparked heated controversies about the mathematical procedures and statistical methods used to count the population, gauge demographic changes or calculate the national income. The Western techniques that used the farm as a statistical unit were inapplicable. These controversies arose in the context of colonialism: how to tell the Egyptian and the British economies apart?

The making of the economy-as-a-thing led to: shifting calculations and controls from the field toward a bureaucracy; creating a bifurcation between the center of calculability and the object being calculated; and setting off processes of organization, exclusion and reformulation that established the economy-as-a-thing, as a calculable object. At this point, Mitchell has resuscitated the well-known idea about the embeddedness of markets: "The economy came into being, not by disembedding market relations from a larger social ground that previously contained them, but by embedding certain 20th-century practices of calculation, description and enumeration in new forms of intellectual, calculative, regulatory and governmental practice" (p. 118). The making of this "calculable space" did not prevent "overflowing"; nor did it eliminate the need for ongoing studies of the practices that, though mapped by the surveys, eluded surveyors and statisticians.

THE UNCERTAIN EXISTENCE OF THE EGYPTIAN PEASANT

"Peasant studies", the second part of this book, focuses on a major figure in Egyptian history, or rather on all those whose studies have turned it into a stereotyped but quite real player: the Egyptian peasant. To paraphrase Yves LACOSTE's well-known statement, "Geography is mainly useful for waging war"(4), we might say that anthropology is mainly (and till quite recently) useful for promoting the idea of the absolute originality of Western culture. This probably true formulation is, however, too vague and general. In the fourth chapter, "The invention and reinvention of the peasant", Mitchell has turned toward the Egyptian peasant and anthropologists' role in constructing this subject for study.

Mitchell's inquiry brings him straight to Richard Critchfield, an unusual journalist with a passionate interest in the plight of peasants in Asia and the Near East. He wrote books that not only the general public but also specialists soon accepted as authoritative. His *Shahhat: An Egyptian*, published in 1978, was extolled in an impressive number of reviews and commentaries. *American Anthropologist* praised it for its outstanding portrayal of peasant life. Critchfield had a place on the syllabus in good anthropology departments in American universities. The book is simple and effective: it presents Shahhat as leading the life of a peasant who, uprooted from his traditional culture, lives through the tragedy of modernization, since peasants whose living conditions and ways of life have, supposedly, not changed for six thousand years were forced to adapt to modernity in less than a decade. This presentation of the clash between cultures and of the traumatic, forced march toward modernization is not at all original.

When peasant revolts broke out against occupants in Vietnam and Palestine, anthropologists were, Mitchell reminds us, requisitioned to explain this unexpected resistance. Who are these peasants? What are their traditions? What do they really want? Two other classics, by French-speaking authors, were

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(3) Georg SIMMEL, "The metropolis and mental life", translated by Kurt WOLFF in *The sociology of Georg Simmel,* Glencoe, IL, Free Press, 1950, pp. 409-442.

(4) Yves LACOSTE, *La Géographie, ça sert, d'abord, à faire la guerre*, Paris, Maspero, 1976.

written when colonial empires were discovering their weaknesses between the two World wars: *Les Paysans du delta tonkinois* by Pierre GOUROU (1936) and *Moeurs et coutumes des fellahs* by Habib AYROUT (1938). The latter by an Egyptian, who was enrolled as a doctoral student in France, became an indispensable reference work in the English-speaking world.

Mitchell's meticulous analysis of *Shahhat* has no trouble proving that Critchfield often repeated phrases from Ayrout word by word, thus endorsing an approach permeated with an elementary exoticism and racism. In line with Ayrout, he did not avoid writing in 1978 (!) that Egyptian peasants were akin to animals because of their sexual violence. What Critchfield did not know was that, by plagiarizing, he was repeating the theories of Gustave LE BON who had influenced AYROUT. According to Le Bon, whose book *La Civilisation des Arabes* had come out in 1884, a society always opposes its elites who, unlike the masses, are capable of leading an individual existence and thinking for themselves. Ayrout applied Le Bon's astounding paradigm to Egyptian peasants: they could not exist as genuine individuals, since they were bogged down among their fellow creatures and amassed in villages – these "immoral assemblages" in need of reform. Critchfield did more than adopt this talented analysis. As a good amateur scientist, he overdid it owing to the supposed objectivity of his diagnosis. He constantly used the third person and said nothing about the interpreter without whom he could not have done fieldwork. After all, Critchfield was doing fieldwork in an Egyptian village without being able to speak a word of Arabic! He forgot to state that, during all the time spent there, he stayed in a luxurious hotel in a Western enclave, where he received Shahhat for interviews! Critchfield did not even mention the tourists who were everywhere, with whom he sipped cocktails to recover from the fatigue of his fieldwork.

Mitchell has investigated this unusual fieldworker. He contacted Ayrout's sister, who had outlived her brother. To his astonishment, he learned that Ayrout, an authentic Egyptian, had not spent a single day in the field while writing his dissertation on fellahs. An ethnologist who observed reality from his air-conditioned bubble had plagiarized an anthropologist who basked in the charms of Provence while drawing a portrait of the Egyptian fellah modeled on the aristocratic ideas elaborated by a French doctor who prided himself on his knowledge of the social sciences… Mitchell does not put an end to his inquiry at this point. It mattered little to him that Critchfield might have been a vulgar plagiarist. What did matter was the question: who benefitted from the crime?

By chance, Mitchell had worked for several years in a village near the one "studied" by Critchfield. While verifying locally what Critchfield said about "his" village, Mitchell was unsurprised to discover not only that the book was a clever assemblage of excerpts from other sources but also that it was riddled with falsehoods. Mitchell has dipped his quill into the finest ink to describe the thorns on the rose. Critchfield, faced with so much proof, did not try denying the charges; he confessed. Pursuing his inquiry, Mitchell discovered strong family contacts between Critchfield and top officials in the CIA. By reconstituting the itinerary of Critchfield's anthropological fieldwork, he has easily shown that the choice of a place for a stint in the field was closely correlated with US military and diplomatic interventions. For instance, Critchfield studied Mauritius when the American government decided to set up a base on Diego Garcia – which led to a massive displacement of islanders forced to emigrate to… Mauritius. From these observations, Mitchell has been delicate enough not to deduce that Critchfield was a CIA informant or agent. As he well knows, what the social sciences had to say did not matter to the CIA. What the CIA did need was for the social sciences to "perform" their objective, for anthropology to invent traditional peasants and then reinvent them so that they come to life on American campuses and in the rest of the world, so that the environment where they survive can be described as a mere extension of museums, where curious tourists discover the peasant's way of life. Social scientists who presented Africa and Asia as missionary fields for the West were infinitely more valuable and useful than anthropologists whose information about people and their actions were of little worth. Colonization is, above all, the making, from pieces of interviews, of cleverly sewn narratives for making a plausible, inevitable, morally and politically just reality, namely Western domination of the planet for the sake of reason and progress.

Establish new property rights, create new economic institutions, launch the construction of hydraulic projects, roads and railroads, remodel villages, concentrate the ownership of land, change crops and farming techniques… all these actions come under the same category of thought: modernization. They entail creating an enemy to be fought, hostile forces to overcome (superstition, tradition, culture, ignorance…). They all inevitably resort to violence. However violence, when it occurs day after day with the poor as victim, is hard to detect and analyze, not just because of the difficulty of obtaining evidence. In the fifth chapter, "Nobody listens to a poor man", Mitchell has turned the usual arguments back on themselves. The problem is not to obtain testimonies, nor to verify the many accounts circulating about crime scenes. The crucial factor is the culture of fear; these accounts and testimonies are symptoms of this culture, which feeds on them. As much can be said about inquiries for verifying whether rumors are true. What is at stake is not the truth of what is said, but the part this saying has in constructing this culture of fear.

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How to analyze this culture of fear? How to untangle its ties with violence? Mitchell has reviewed a few usual explanations. The first one is psychosociological: peasants expect and demand authority. They need and accept this authority, but this is merely an outer acceptance. Deep inside, they reject it. Violence is committed twice: first to make this split (outer submission but inner rebellion) and secondly to contain any resentment that happens to be expressed outwardly. For Mitchell, two other explanations are political. The one presents violence as the consequence of changes imposed from the outside. For example, since a reform of property rights affects their interests and way of life, the peasants revolt. The other explanation focuses on the local dimension of outbursts. It has to do with the coercive nature of the relations created between individuals belonging to the same village community or work group: "To be an individual in such a village economy means to be already situated in a set of coercive relations" (p. 172). For example, the difficulties of the labor movement might lead to sporadic, violent uprisings. These explanations see violence as part of a causal chain that, under certain conditions, leads to "violent" outbursts.

These explanations do not satisfy Mitchell. By focusing on attitudes and behaviors, they are unable to understand the culture of fear, which he deems essential for explaining the place of violence. The problem to be solved is mainly methodological. Associated with the culture of fear, violence entails silence, denial, the absence of tangible evidence. The notion of symbolic violence is useful for exposing this invisible part of the iceberg; but since it makes all explanations possible, it seems to amount to a form of intellectual laziness. Mitchell does not have the answer to this enigma, since whatever happens occurs in a silence where it is impossible to speak up. While rereading a study, based on interviews, of the political mobilization of peasants, Mitchell came to a standstill at the response of one interviewee who was asked to talk about the village's problems: "There are no problems," he said. "We just need a bakery", he added, "Not much grain these days in the village, and people baking at home are causing fires." "You think you can do something about it?" "No, I am a poor man and nobody listens to a poor man" (p. 177). Mitchell sees this impossible articulation as a possible origin of violence.

The culture of fear is expressed through silence, the refusal to respond or the ingrained inability to talk. To make people talk and, if they do not do so on their own, to free their tongues and release them from silence is a moral imperative shared by both well-intentioned policies and the social sciences when they are attentive to the humanity of their subject of study. Mitchell seems to think that we have moved beyond this point. What is important is not so much to free speech as to work on the mechanisms that force peo-

ple to remain silent. Expressing feelings is not necessarily talking. Obstinate silence turns out to be a positive form of expression and articulation instead of the antithesis of speech. Given this enigma, Mitchell has formulated a sentence that sounds more like an admission of powerlessness than a genuine program: "Those who live intolerable lives, coping with poverty, unemployment, hunger and other more direct forms of coercion, must somehow express their condition and yet may be unable to find the opportunity, the courage, or the language to do so" (p. 177).

This peasant – presented as someone battling against modernity and forced to live in a climate of fear – is to fit into the imaginary community called a nation, to remain loyal to what the experts call the national heritage. This is the theme of the sixth chapter, "Heritage and violence". The building of nation-states is a classical subject of study for historians and political scientists. The nation, to adopt ANDERSON's well-known formula(5), relies on techniques for making people imagine that they form a single community with others whom they do not know.

Mitchell has envisioned nation-building from two angles. The nation as an educational experience comes down to the idea of making people increasingly aware of the existence and reality of a collective actor. The latter emerges independently of any reference to, or encounter with, Otherness (*i.e.*, with others with whom one knows one's distance). The nation as a byproduct of nationalism implies a strong dose of autism. However the nation cannot exist without generating and regenerating meetings, encounters, shocks, that lead to the forming of an identity, a self, that sets it apart from others, from other nations. The nation takes form through opposition. Mitchell has chosen to study this twofold mechanism by following up on the attempts to reconstruct and rehabilitate a village caught up in the turmoil of the tourist trade

In 1945, the decision was made to move Gurna, a village near Luxor, so as to avoid interference with nearby archeological sites and their visitors. The peasants were accused of plundering the sites and harassing tourists. Hassan Fathy, the architect in charge of this project, seized an opportunity for restoring what he felt was the "vernacular" architectural tradition, which, in his opinion, had gradually been lost. This appeal to tradition was not at all backward-looking; it was made for the sake of progress. It sought to restore sanitary conditions, rational forms of energy consumption and a relatively autonomous food supply. Fathy encountered difficulties while trying to revive architectural techniques from bygone days. For instance, the beams needed to build the traditional vaulted granaries were hard to find nowadays. While

(5) Benedict ANDERSON, *Imagined communities: Reflections on the orgin and spread of natationalisms*, London, Verso Editions 1983.

© H. Cartier-Bresson/MAGNUM-PHOTOS

In 1945, the decision was made to move Gurna, a village near Luxor. The peasants were accused of plundering archeological sites and harassing tourists. (Gurna in a 1950 photograph taken by Henri Cartier-Bresson).

traveling in southern Egypt, Fathy discovered in the area of Nubia a technique using small mud bricks. He immediately transposed it to Gurna. However the peasants, who had been associated with plans for their new village, did not want this tradition. They preferred palm trees, which had several advantages. Fathy's failure was not that of "tradition". The technique in question turned out to be a recent innovation since the so-called Nubian village had come into existence but a few decades earlier!

This failure did not dissuade authorities from relaunching the project in 1998 in order, once again, to preserve the archeological heritage and ensure the well-being of peasants in comfort traditional housing – once again, the fight to protect the archeological heritage from plundering peasants. But this time, the resistance turned violent and ended in bloodshed. The "teachers" intent on learning to the "people" that they have a past that enriches their identity (traditional architecture) and that they must preserve (the archeological sites) were sent back to the classroom. The nation taught in school, the nationalistic nation, ended in a fiasco.

The other nation – the imaginary one, not the nation taught in school but the one at the center of a (theatrical) performance – was hardly any more successful. It is closely linked to tourism, this pageantry of Egypt for foreign visitors. In a few brilliant pages, Mitchell has described how this full-fledged industry developed. American consultants (the offices of Arthur D. Little in 1982) worked out the strategy: form an enclave where tourists circulate without encountering the Egyptian population. Mitchell has finely analyzed this trade. It offers experiences for consumption, but brings nothing positive to Gurna and the village economy. The enclave is fully integrated in this foreign trade. In fact, a passport is needed to enter the touristic complexes, which have been designed to be self-sufficient. Local labor is strictly disciplined so that the tourists are not bothered. This trade seeks to fully identify contemporary Egypt with the land of the Pharaohs. As a peasant from Gurna ironically put it: "Tomorrow they will say these slippers I am wearing came from Ramses II" (p. 201)! One reason for keeping the local population of peasants, thieves and barbarians out of touristic sites has been the determination to put an end to trafficking in archeological objects. Mitchell has no trouble showing that this illicit trade, if it exists, is organized or even allowed by public authorities. The greatest irony in this situation is that these plans to separate the local population from the tourists run counter to the demands and desires expressed by the aging, wealthy American women who come to Egypt to find "part-time" husbands. In exchange for their financial help for small businesses, they satisfy their sexual needs a few

months per year. "Enframing" a situation always leads to "overflowing".

The Egyptian nation defined by the sharing of common values and traditions (imaginary nationalism) and the one constructed through the organization of relations with others (the tourist trade) are complementary and closely interrelated. Gurna has been designed both as a reactivation of an imaginary past and as a sort of frontier post between Egyptian society and its presentation of itself to "others". This performance, for internal and external use, is not without violence. The story told by Mitchell is proof. Paradoxically, the building of the Egyptian nation justifies excluding and disciplining the peasants. The results do not, in these conditions, come as a surprise. A petition signed in 1996 by the inhabitants of Gurna ends with this desperate remark: "We have begun to wonder whether we are Egyptians" (p. 207). Contrary to what those tempted by Manichaeism (whether Arthur D. Little or the opponents of globalization) might think, these peasants well knew that their interest was to live with the tourist trade: "We are married to the tourists" (p. 205), a statement that might, as I have just pointed out, sometimes be literally true! Mitchell has lucidly noted that no studies have been made on the water supply whereas several have been commissioned on the tourist trade.

HOW EGYPT BECAME AN ECONOMY

The third part of the book, "Fixing the economy", focuses on the mechanisms and arrangements that bring into being the economy as a thing that is hard to control and constantly risks coming undone. The Egyptian economy is a recent invention. The seventh chapter, "The object of development", shows how international organizations finally managed to invent this improbable reality and impose measures for its development.

We hold a stereotype of Egypt, one repeated by specialists, as a narrow stretch of inhabitable land fertilized by the Nile overflowing its banks and depositing alluvium, where soaring population growth is making the situation worse. The following question states the equation defining the situation: how to see to it that a growing population survives on necessarily scarce resources? Since natural conditions restrict the available policy options, the decisions are to be made to solve as effectively as possible fully identified technical problems. This vision of Egypt underpins the power exercised by experts – by the three agencies based in Washington (the IMF, World Bank and United States Agency for International Development, USAID) that have monopolized "expertise". Chapter seven presents the reforms advocated by these organizations during the 1970s and 1980s.

To expose the mechanisms whereby this expertise exercises a stranglehold over politics, Mitchell has focused on the formulation of problems, in particular the one raised, or rather imposed, by the World Bank: "Egypt has the largest population in the Middle East […] Its 52 million people are crowded in the Nile delta and valley with a density higher than that of Bangladesh or Indonesia" (p. 212). Mitchell has delivered a brilliant critique of this text. After examining the idea of overpopulation and the comparisons with Bangladesh and Indonesia (and why not Belgium!), he has shown, by reviewing farming statistics, that agricultural output is increasing at the same pace as population growth. The actual problem has to do with distribution, since the policies adopted have worsened inequality. USAID has admitted this in the advice and criticism that experts voice among themselves: "Under these politics, losers necessarily outnumber winners" (p. 214).

Egypt is unable to ensure its basic food supply because the agricultural system has been so deeply transformed. The country started importing cereals, not to feed human beings but to fatten animals in order to satisfy the demand for meat from the wealthy classes in society. Peasants are to purchase their food, since they no longer produce it. All this has cultivated an astronomical national debt, which the United States canceled at the time of the war with Iraq in exchange for the government's support.

The argument based on a lack of farmlands is no longer credible. Once again, the statistics are cruel. At issue are the distribution and redistribution of land, and the recognition of smallholders' property rights.

All things considered, the image of Egypt overwhelmed by nature – a narrow strip of overpopulated land – is a screen for masking the issues of inequality and of people deprived of power. It turns political questions into technical problems, thus preparing the soil for experts, who fill their role by prescribing treatments. The first therapy was to modernize the so-called "backward" agricultural sector. Excessive mechanization obviously worsened inequality, given the unequal solvency of peasants. The second treatment called for a free market and decentralization. The Egyptian government, deemed to be too interventionistic (since Nasser's coup d État in 1952), was urged to play a lesser role in the economy. This is a well-known program: the campaign to free farm prices and the privatization of health, social services and education. The effects are mechanical: the deepen-ing indebtedness of the poorest and the economy's growing dependence on the United States (especially for pharmaceutics). Once again, the privilege of drawing the lessons from this deregulation is handed to USAID: "The better off, the more educated and expert officials benefit more than ordinary villages" (p. 228).

This depoliticization of the economy coincides with the transformation of Egypt into an object of deve-

lopment. Egypt, as a country, economy, nation and community has become an autonomous object of "thought" about its development. The nation-state is one outcome of the factors and methods that organize social practices and turn them into mental representations: language, highways, television, cadastral maps, the literature on tourism, the studies devoted to countries in the South, the statistics produced by international organizations, and so forth. This objectivation of Egypt as a nation and an economy to be developed has two consequences. First of all, it makes it easy to simplify by focusing on, for example, trade policy instead of the complicated, differentiated networks of interdependence. Secondly, national and international centers of "expertise" analyze, advise and evaluate while placing themselves outside the object they describe even though they intervene and perform actions on it: "An organization like USAID, which must imagine itself as a rational consciousness standing outside the country, is in fact a central element in configurations of power within the country" (p. 233). The USAID program's main objective was to reinforce and develop the private sector. Its interventions strengthened the state's hold, quite simply because its contacts – the levers that USAID proposed using – were within the state: "USAID could not diagnose itself as an integral aspect of the problem" (p. 234). For Mitchell, the problem is not so much the accuracy of the reports and advice coming from international organizations as the latter's inability to imagine their role as well as the effects and limits of their interventions. In the language of the social sciences, we might call this a deficit of reflexivity.

This interpretation is still too kind; for Mitchell has gone on to show that international organizations are, in fact, helping to increase the economic and political hold of the United States. The appeal to free enterprise conceals the system of financial aid and its effects. The analysis of financial circuits leads to impressive conclusions. By asking the Egyptian state to reduce its interventionism, international organizations are used as the secular arm of the American government, which is thus reinforced. Aid serves to create a solvable demand for the products and services proposed by American firms, orders for military equipment being of crucial importance. As Mitchell points out, Egypt is part of the American government's farm policy. By forbidding subsidies for Egyptian farmers, transnational organizations open the market for American multinationals, which, as we know, enjoy considerable subsidies in the United States. In fact, 58% of US economic assistance is spent in the United States on something other than development projects, while the remainder goes to the American firms involved in these projects. Of course, the population benefits from these purchased goods and from these projects, but the effects are a cause of concern since the

Egyptian economy's dependence augments along with its debt.

This analysis opens perspectives for looking beyond Egypt. The function of the neoliberal doctrine might well be to weaken nation-states, save the United States of America. Expertise, especially in the social sciences, and the "technicization" of the problems of development are cornerstones in this overbearing arrangement.

The development policies advocated by international (in fact, US) organizations call for a free market. The eighth chapter, "The market's place", starts by asking what it means to establish a free market. Answering this question necessitates studies conducted in the field. Before turning to fieldwork, Mitchell examines the hypotheses entailed by the question. When a speaker talks about "the" market (in the singular), he believes in the existence of a perfectly defined reality that, called a market (or capitalism), has its own logic for ensuring its reproduction and even its growth. Many definitions have been proposed: self-interest, profit-seeking, the law of supply and demand for setting prices, the circulation of information, the accumulation and reinvestment of capital, the division of capital and labor, and the historic process of worldwide expansion. Those who defend and who oppose capitalism both share the hypothesis of a self-contained market.

The hypothesis of a borderline separating the market from the nonmarket sphere (a hypothesis that tends to present the state as the warranty of the free market) is, as Mitchell has emphasized, the point where an immense work of compartmentalization is undertaken – work performed by, in particular, the various social sciences when they turn toward the economy. Furthermore, institutions are set up to oversee this compartmentalization. As Mitchell's subsequent studies have shown, colonization and especially decolonization (with nation-states in place of the former colonies) have played a key role in concretizing national economies and the economy-as-a-thing, in making them into manipulable, governable objects with their own logic. These objects are contemporary creations. Keynes, often said to be the father of the welfare state, contributed powerfully to the objectivation of the economy-as-a-thing – through the long controversy about India's financial autonomy and then through his macroeconomic models backed up with national statistics. The market and welfare state are two sides of the same coin.

After having helped formed the economy-as-a-thing, the social sciences hastened to qualify their handling of the "noneconomy". This is where the history of economic sociology, heterodox economics and economic anthropology begins. Mitchell is content with pointing out two strategies for analyzing the relations between the market and nonmarket spheres and for imposing the idea of a separation between the two. The first one is well known: embeddedness, whereby calculations do

Mitchell has shown that international organizations are, in fact, helping to increase the economic and political hold of the United States.

not stop at the bounds of the market. For example, peasants, when involved in practices outside the market, are described as, in fact, constantly interacting with the market. The second strategy hinges on alternative economies. Here, the point of contention is not the existence of markets but their universality. The Western market organization cannot be applied as a solution everywhere, since contact with other realities alters it, whence the emergence of other forms of economy, of other economies. In both these cases, as Mitchell has indicated, the idea remains intact that a model of the market (or of a reality taken to be the market) exists. Embeddedness merely complicates relations between the market and what lies outside it. The thesis of the existence of alternative economies only discusses the conditions for its own extension.

Mitchell has used case studies to show that we must abandon the idea of the existence of the market (or of capitalism) if we want to describe what is happening in the Egyptian countryside. The example of tractors sheds light on the interrelations between various practices that we cannot analyze as the juncture of different forms of production – what used to be called the articulation of modes of production. In particular, the subsistence sector does not underlie the market economy. The exact opposite is true: "Market crops, protected and promoted by the state, survived in support of self-provisioning" (p. 255). For a lesser, a mightier parasite! The study of price-fixing lends support to this thesis: there is no price that is not regulated, that is not tied to a monopolistic position. Likewise, there is no sector of the economy that is not subsidized. Reforms in favor of the free market merely increase these interrelations and reinforce the subsistence sector. Even officials recognize the collateral damage, but this does not keep them from staying the course or using force, if need be. As a peasant told Mitchell, "They put us in the mill and turn it and turn it" (p. 265). Being ground in the mill does not increase the autonomy of the market but, on the contrary, does multiply the interrelations between the various forms of activities now said to be economic.

Interested in the role played by experts, especially by social scientists, Mitchell has noticed that this campaign of reforms did not rely on case studies of conducted in villages. Ultimately, experts are convinced, like their critics, that we know everything about the market and nonmarket spheres and, therefore, know what measures to take: "The power of what we call capitalism rests increasingly on its ability to portray itself as a unique and universal form […] The displacements and reformulations of the capitalist project show its dependence on arrangements and forces that this logic needs to portray as noncapitalist" (p. 271). Everyone who talks about capitalism or the market, whether by extolling or stigmatizing them, is helping them exist as an objectivated reality. How to understand this market, which everyone believes they know so well?

In the ninth chapter, "Dreamland", Mitchell cites practical examples to analyze not the Egyptian economy but the set of mechanisms and arrangements that bring into existence what is called the (formal) market economy, a dreamland and enclave of modernity. It is created by following IMF recommendations: devaluation of the national currency, the demarcation of two separate spaces for the circulation of money (one for the dollar, the other for the Egyptian pound), the reduction of the money supply and the abolition of subsidies for the public sector. This policy is recommended for all national economies. The IMF is satisfied with its pupil. It does not matter to it that the effects on the population were unmistakably negative: you have to suffer at first to gain the right to be happy later on. Mitchell has described these effects by drawing on scarce, incomplete sources of information, which he has tracked down in the notes of reports. Economics as a discipline, and economists as experts are important in this story.

What the IMF describes as the privatization of the public sector leads to the formation of networks that, both public and private, bring government and business into a close relationship. A few solidly established families control these networks(6). Mitchell has shown, in particular, how a banking sector that speculates against the Egyptian currency eliminated, with massive support from the state, the active and efficient "Islamic investment companies": "The reform program did not remove the state from the market or eliminate profligate public subsidies. Its main impact was to concentrate public funds into different hands, and many fewer" (p. 282). These family groups, whose history Mitchell has recounted, share the following characteristics. They are nurtured by public contracts and receive support from USAID. Since they include private banks, which fund their operations, they very seldom resort to financial markets. They have very few employees. They specialize in supplying goods and services to a tiny fraction of the population: 3% consume 50% of the wealth.

Reforms, a substitute for an economic policy, help create a space that exists as such and can be described as economic. Statistics objectify this space and only concern it, since all else lies outside the statistician's grasp. This "all else" is what we call the "informal" sector. Although it cannot be measured, it is far from negligible. For example, the importation of cannabis resin during the 1980s amounted to between two and four billion US dollars, an attractive figure far above the value of all other Egyptian imports (not counting petroleum). Furthermore, a fifth of government expenditures goes to the military; they are not de-

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(6) They are identical to what David STARK ("Recombinant property in East European capitalism", *American journal of sociology,* 101, 1996, pp. 993-1027) has so clearly described in the countries of eastern Europe during the transition toward the market economy.

scribed, and no figures are given, in reports or statistics. "The problems of informal, clandestine and unreported economic activities are so great that these alone would provide sufficient reason to question the idea that the economy is an object that can be mapped and measured" (p. 289). The pair of concepts "enframing" and "overflowing" serve to describe and analyze the relations between the market and so-called nonmarket sectors.

Mitchell has tried to identify and analyze the enframing of the Egyptian "market economy". He has concentrated on three arrangements: property rights (the second chapter having presented their origins and effects), the family institution and multinational corporations. As shown by an analysis of the industrial groups busiest in the formation of this "economic" enclave, the family and household are factors that shape economic activities and limit "overflowing" but without ever fully stopping it. After all, families are divided and pitted against each other, as bonds of matrimony and ties of affection suddenly come apart. Big multinational corporations play a powerful part in this "enframing" process. By making nonmarket arrangements, they make it possible for the market to exist. We are familiar with Simon's striking metaphor for this anomaly: were we to color market relations in green and hierarchies in red, the Earth, seen from Mars, would be bright red. Mitchell's original analysis of the part played by big firms in this reframing process emphasizes that economic theory has always (and not just since Ronald Coase) shown an interest in this usual existence of organizations and hierarchies at the very core of markets. Mitchell recalls that Marx in Volume III of *Capital* already raised this problem.

Noting that big corporations evidently preceded the installation of capitalism, Michell's argument runs counter to every supposition made by theorists of the market economy. Hierarchical organizations are not a consequence of capitalism, as the theory of transaction costs claims in veiled terms. For Mitchell, the opposite is true: capitalism, as Braudel rightly saw, is a consequence of the existence of the big companies born in the 17th century. According to Mitchell, the market, as described by Adam Smith, was conceived as a countervailing power to these big companies, which, like the Indies companies, had formed economic and political empires, and even held a monopoly over the founding of colonies. As Mitchell has shown elsewhere, these companies, which the market was supposed to contain, probably served as a model for the United States – we need but recall that the American flag with its stars and stripes is an exact copy of the East India Company's flag. The modern state, which intervenes in the economy to enable it to exist and develop, and the liberal market are machines originally designed to fight against the omnipotence of big companies.

Since then, we live in a world with a balance of power between three sets of players: the state, the market and multinationals. The hard task of managing this balance explains why the development of economics as the science of markets is closely related to the formation of a body of knowledge about organizations (law, accountancy, marketing, etc.) and about the instruments and techniques to be used by the state (econometrics, statistics, macro-economics). From its origins, the (capitalistic) market has been a piece in a complex puzzle of interdependent and countervailing powers. Were this balance to come undone, the market would fall under the hierarchical arrangements proposed by family networks or powerful corporations, or else become dependent on government.

Focusing on but one of these three players – the free market – leads not only to bracketing the other elements in this system, without which it would not exist, but also (and especially) to transforming the effects of this enframing process into substantial realities. By only showing an interest in the planet's dreamlands, by forgetting the forces that demarcate these enclaves, economic theory trivializes violence, considering it to be a secondary activity. It obstinately tries to turn anything that does not enter into the framework into a residual reality. Violence, "over-flowing" and nonmarket institutions are not on the periphery of the markets but at their center.

DOMINATION

Hopefully, this review has convinced readers of the radical originality of *Rule of experts*. Mitchell has, with consummate skill, eluded all the traps awaiting anyone who shows an interest in developing countries. He has dodged the easy solution of pointing a blaming finger, but he has made us feel what has to be called, for want of a better phrase, relations of domination. His light style – constantly tinged with a sense of humor and a feeling of empathy for those who, though unable to make their voices heard, have something to express – adds force to his argumentation and demonstration.

Postcolonial situations are irreplacable laboratories for whoever wants to understand the forces at work in globalization. They are, too, tough subjects to study, imperiling any theoretical analysis by placing it in jeopardy of reductionistic simplifications. Mitchell's exploit is to have tackled this incipient subject without turning his theoretical and methodological tools into an eyesore for readers. The theory is embedded in the telling. Thanks to clever shifts in time and space, the reader is plunged *in medias* res into this complicated story.

Mitchell has shown the value of the multisite studies now advocated by anthropologists. He has thus shed

light on several forces and the changing patterns they form. A story in a network: a history of shifts, leaps and rapprochements; a history that abolishes borders (between micro and macro; between economy and politics, or even between nation and globalization) while trying to show how these borders have been drawn, questioned, shifted; a history that, as a consequence, lets us see the role played by mosquitoes and parasites, by ammonium nitrate, by private property and by American women begging for and then buying the favors of the natives; a history of hydraulic proj-ects and international organizations, of cadastral maps and family ties; a history immersed in the deafening silence of a voiceless, concealed violence, which the social sciences normally have difficulty bringing to light and analyzing.

As its title indicates, this book deals with the role of "expertise", in particular by the social sciences, in the making of what is called society, economy, nation, globalization or even tradition. Michel Foucault, in *Discipline and punish* and then in his writings on the birth of biopolitics, was among the first to draw attention to the performative nature of the social sciences. Mitchell has pursued this exploration. His knowledge of the anthropology of science and techniques and of the very new anthropology of markets, along with his control of theories about state-building, have enabled him to accurately and convincingly describe the contribution of the social sciences to postcolonial studies. This book, along with a few others being released, harbingers a new era for the social sciences. The latter can no longer remain outside the subject being studied or, worse yet, take sides and become *engagé*.

But how to proceed so as to produce analyses that are not locked in the labyrinth of reflexivity? How to cope with the enormous problems of writing that arise for authors who refuse the stance of a scientist (keeping the subject of study at a distance) but also refuse to wave a censorious finger? It is not the least of the qualities of Mitchell's book to have shown that this challenge can be taken up in an elegant and convincing manner without yielding to the obscurities of reflexivity.

The author is present everywhere, not as a guide or witness nor, worse yet, as a character who throws his subjectivity in the reader's face. Since the "social-in-construction" (in other words, the very subject of the social sciences) is made for the most part by colleagues, social scientists, engineers and scientists of all disciplines, we need but follow their work to reach our objective. It is not beyond reach; for we are part of the establishment! By following the social sciences and, too, the natural and biological sciences, Mitchell has taken us to the core of the building of the Egyptian nation, to the strategies for bringing a free market into being and for relating the modern economy to the ancient glory of the Pharaohs. Who other than a political scientist trained in the hard school of history, economics and anthropology, and specialized in Arabic grammar, could have done as much? The "social scientists" are starting to pay their debt by showing us that we are unable to understand the world surrounding us if we do not take into account the role they have played – and still play – in formulating it and making it intelligible. ■

BOOK REVIEWS

ELECTRONIC COMMUNI-CATIONS

On Marie Bia Figueiredo and Michel Kalika's
La Communication électronique **(Paris: Economica 2009).**

Is it still necessary to place "new" in front of the phrase "information and communication technology" (ICT)? This technology probably had to lose the attribute "new" before an overview of the sort provided by these authors could be made. This book gives us insight into the many currents of theoretical thought about ICT's impact on our lives at the workplace during the past fifteen years. Sociologists, managers, communication specialists… the fireworks of hypotheses and interpretative grids is enlightening. The book advances through all this with the advantage brought by time, swinging back and forth, like a pendulum, between electronic communications (e-mail) and technology in general. The utopianism of technicians greedily calls for new objects to rearouse hopes and expectations. ITC has conveyed several promises to the world of business: information-sharing, autonomy, productivity gains, the development of collaborative work, etc. The phase of "enchantment" is now over, and the assessment is full of contrasts.

While allowing for a critical perspective on technology, in particular on ITC's "ambivalence", the authors prefer a more fertile approach in terms of "equivocation" (with reference to the many uses to which a technique can be put). They thus stand clear of the radicalism characteristic of technical determinism, which has a major drawback, namely: it freezes users in a passive posture – in the words of Jacques Ellul, technology "bears its effects by itself, independently of users" (*Le Bluff technological*, 1988). From this vantage point, the concept of "appropriation" logically takes center stage. It is questioned, dissected, dwelled on; and after all this, the "distracted use" of the word yields to conceptual precision.

How do we appropriate a technique? The answer mainly depends on the faculty of seeing what is "around" us: the social context, wage-earners's personalities, a group's structure, its relations and norms – anything that leads to variations in uses. Appropriation is thus conceived as a "taming" of the technical object, as the way each of us gives it a meaning, as Pierre Lemonnier, an ethnologist, showed by comparing social conditions for the emergence and use of arrowheads among the Angas in New Guinea and of airplanes in our societies. In other words, technical choices are mainly determined by social actors' cognitive representations of them. The other heuristic value of the concept of appropriation is that it contains a bundle of oppositions and tensions that very often helps us unravel the relations between people and the "structure". The contrasts between the prescribed and actual uses of e-mail show that, in this technique as in others, the uses foil the best established rationalizations, and users pay scant attention to the "directions". The authors report several tensions. Let us mention a few. ITC's optimization of the flow of information produces saturation, a fact observed a long time ago and now a commonplace. A sense of emergency is felt owing to the transmission speed of e-mail. The ideology of information-sharing collides with the concern for protecting information as the "firm's heritage". Erasing the bounds between the private sphere and the world of work splinters worktime: an employee might e-mail his wife from his office, but once at home, he will turn his back to his lady in order to answer work-related e-mail…

La Communication électronique has been drawn from a dissertation. It is based on a case study carried out in a work team at France-Télécom. We are full of curiosity given recent reports in the news on this firm's tribulations, which are seen in the mirror of ICT's impact on employees' lives and the social climate.

What do we learn? Although the critique is limited, a few significant points stand out in the empirical data. Behind communication and the ideology of "transparency" (or even the promise of autonomy) is lurking the specter that communications will be traced with its corollary: control. "Logics of power" mix with "logics of communication". The conclusion might be too quickly drawn that "e-mail messages have grown to the detriment of traditional hierarchical procedures", since these messages function like "signs" of authority and prestige. An overload of e-mail messages, though a disadvantage, is compensated by the fact that it reinforces the person's hierarchical position: "Tell me how much e-mail you receive per day, and I'll tell you what level you have reached in the hierarchy." The comment of a department head (p. 157) is worth quoting: "At the start, when you are an underling on the line, you have fewer messages, and they are usually in-coming mail… Today, I receive a hundred messages a day because my level of responsibility in the firm is important. I don't think my colleagues receive as many." In like manner, the person who has power can draw up the list of those to whom he addresses mail as a function of their rank in the decision-making process, the message's header corresponding to the sender's position in the hierarchy.

The authors draw the conclusion that electronic communications are reinforcing the bureaucratic

structure. To its credit, this study has avoided the limits of a purely managerial approach illustrated, in my opinion, by the survey conducted under the auspices of Microsoft in 2004 during the "Deuxieme Observatoire des PDG" and devoted to the impact of ICT on the development of human capital. Three quarters of managers answered affirmatively the question: "Has e-mail simplified human relations in the firm?" For such a poorly formulated question, the answer amounted to "Move along, there's nothing to see!" But there is, in fact, something to see, as this book (even though it is not always up to par, my main reservation) shows us by placing its subject of study at a distance and by "vitrifying" it behind an abundance of theoretical and methodological grids of analysis. We would have liked to be led deep into the practices, the flesh and blood, of this microsocial world thanks to a tighter analysis of, for example, the "language of e-mail", a subject not yet broached as such.

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Article translated from French by Noal Mellott (CNRS, Paris, France)

LA COMMUNICATION ÉLECTRONIQUE

À propos du livre de Marie Bia Figueiredo et Michel Kalika, *La Communication électronique* (Paris, Economica, 2009, 206 p.)

Des NTIC aux TIC ? Il fallait sans doute que les technologies de communication perdent l'attribut de la nouveauté pour donner lieu à l'effort de synthèse proposé par les auteurs de cet ouvrage. Celui-ci nous livre une radiographie des nombreux efforts théoriques pour penser l'impact des TIC sur la vie au travail depuis une quinzaine d'années. Sociologues, gestionnaires, spécialistes de la communication ; le feu d'artifice des hypothèses et des grilles d'interprétation a été particulièrement nourri, les salves inégalement éclairantes. L'ouvrage chemine parmi tout cela avec le bénéfice d'un certain recul, selon un mouvement de balancier entre la thématique du courrier électronique et celle, plus globale, de la technologie. L'utopisme technicien étant toujours avide de nouveaux objets pour nourrir de nouvelles attentes et de nouveaux espoirs, les TIC ont été le support de plusieurs promesses pour le monde des entreprises : partage de l'information, développement du travail collaboratif, autonomie, gains de productivité, etc. Cette phase « d'enchantement » étant désormais partiellement révolue, elle cède la place à un bilan plus contrasté. S'ils accordent donc une place à l'approche critique de la technique axée sur « l'ambivalence » des TIC, les auteurs lui préfèrent néanmoins la piste plus féconde de leur « équivocité » ; au sens de la pluralité d'usages dont elles font l'objet. Ils se gardent en cela du radicalisme propre au déterminisme technique dont le principal inconvénient est de figer l'usager dans une posture passive, à l'image de Jacques Ellul, pour qui la technologie «portait ses effets en elle-même, indépendamment des usages » (*Le Bluff technologique*, 1988). Ce parti étant pris, la notion « d'appropriation » se trouve logiquement au cœur du livre. Elle y est interrogée et disséquée, dans de longs développements au terme desquels on est passé avec profit de « l'usage distrait » du mot à une rigueur conceptuelle. Selon quelles modalités s'approprie-t-on une technique ? La réponse réside principalement dans la faculté à regarder ce qui est « autour », mettons le contexte social, la personnalité des salariés, ou encore la structure du groupe, ses relations, ses normes ; bref tout ce qui en fait varier les usages. « L'appropriation » se conçoit, dès lors, comme un apprivoisement de l'objet technique, une manière propre à chacun de lui donner un sens. C'est ce qu'avaient déjà montré les travaux de l'ethnologue Pierre Lemonnier, à partir d'une comparaison des conditions sociales d'émergence et d'usage des capes d'écorces et des pointes de flèches chez les Angas de Nouvelle Guinée avec celles des avions dans nos sociétés. Soit : les choix techniques sont principalement déterminés par les représentations que les acteurs sociaux s'en font. L'autre force heuristique de la notion « d'appropriation » est qu'elle renferme un faisceau d'oppositions et de tensions qui constituent très souvent les bons fils sur lesquels tirer pour dévider la pelote des rapports entre les hommes et la structure. Les oppositions entre les usages prescrits et les usages effectifs du courrier électronique montrent que là comme ailleurs, les usages déjouent les rationalisations les mieux établies et « froissent le mode d'emploi ». Les tensions recensées par les auteurs sont multiples. Quelques exemples : l'optimisation des flux d'information par les TIC produit de la saturation, constat déjà ancien et devenu presque banal. La rapidité de la transmission produit un climat d'urgence. L'idéologie du partage de l'information se heurte simultanément au souci de la protéger en tant que « patrimoine de l'entreprise ». L'effacement de la frontière entre vie privée et vie professionnelle contribue à l'éclatement des temps de travail : si un salarié envoie un mail à sa femme du bureau, il va aussi, une fois rentré chez lui, tourner le dos à sa dulcinée pour répondre à ses mails professionnels et à leurs contraintes… Issu d'un travail de thèse, *La Communication électronique*, s'appuie dans un deuxième temps sur

une étude de cas réalisée au sein d'une équipe de France Télécom. On se pourlèche les babines en pensant aux affres récents de l'entreprise, mis en miroir avec l'impact des TIC sur le vécu des salariés et le climat social. Qu'y apprend-on ? Même si la dimension critique reste limitée, quelques éléments significatifs se dégagent du matériel empirique : derrière la communication et l'idéologie de la transparence ou encore la promesse de l'autonomie, le spectre de la traçabilité des communications et de leur corollaire, le contrôle. Mais aussi des logiques de pouvoir qui se mêlent aux logiques de communication : s'il est parfois trop vite admis que « les mails se sont parfois développés au détriment de la voie hiérarchique traditionnelle », on constate également qu'ils fonctionnent comme des « signes » d'autorité et de prestige. L'inconvénient de la surcharge de mails est en réalité compensée par le fait qu'elle conforte une position hiérarchique : « dis-moi combien de mails tu reçois par jour , je te dirais quel est ton niveau hiérarchique »…(les propos du chef de service de la FIRE, p 157, sont sur ce point un véritable régal : « Au départ, quand on est simple exécutant, on a moins de messages, et ce sont surtout des messages qui vous arrivent… aujourd'hui, je reçois une centaine de messages par jour parce que j'ai un niveau de responsabilité important dans l'entreprise. Je pense que mes collaborateurs n'ont pas autant de messages… »). De la même façon, celui qui a du pouvoir peut fixer la liste de ses destinataires en fonction de l'importance qu'ils ont dans le processus de décision : l'entête du message donne une représentation hiérarchique de l'émet - teur. Au final, les auteurs en concluent à un renforcement de la structure bureaucratique par la communication électronique. Le mérite de l'étude est ainsi de prendre ses distances avec les limites d'une approche strictement mana-

gériale, bien illustrée me semble-t-il par l'enquête effectuée sous l'égide de Microsoft en 2004, lors du 2ᵉ Observatoire des PDG, consacré à « L'impact des technologies de l'information et de la communication sur le développement du capital humain de l'entreprise ». À 75 %, les managers répondaient favorablement à la question suivante : « le mail a-t-il simplifié les relations humaines dans l'entreprise ? ». Une question mal posée, une réponse qui incitait au « circulez, y a rien à voir ! ». Or il y a, précisément « à voir » comme le suggère ce livre, sans toutefois s'en donner toujours les moyens – c'est le principal bémol – en mettant à distance son objet et en le vitrifiant derrière la profusion de grilles théoriques et méthodologiques. On aurait aimé, en effet, davantage plonger au cœur des pratiques et dans la chair de ce micro-social, avec une analyse plus serrée, incluant par exemple la « langue du mail », finalement peu abordée en tant que telle.

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HUMAN RESOURCE MANAGEMENT IN MASS-MARKET RETAILING

On Christophe Vignon's (ed.) *Le Management des ressources humaines dans la grande distribution,* Paris, Vuibert, 2009

Contradictions and tensions are probably the two words that provide a key for perusing this book on human resource management in hypermarket chains. Its chapters explore the contradictory rationales at work in mass retailing and the tensions thus created in the management of human resources in this branch of the economy.

The introduction alone uses a host of phrases to describe these contradictions and tensions, thus evincing the centrality of this phenomenon. Readers familiar with the editor's previous study (Vignon 2002), which dismissed both "humanist projects" and "managerial logics" without taking sides, will recognize the line of inquiry. The present volume focuses, however, on another contradiction, the one arising as hypermarket chains waver in both their rhetoric and practices between a "customer project" and a "logic of industrial standardization". The current context reinforces these organizational contradictions and tensions, which might be related to the very notion of a "retail industry".

This book explores the consequences that the requirements of a highly competitive, constantly changing market have on human resources. Its inquiry brings under consideration the implication, training, and emotional as well as psychological experiences of a cross-section of employees.

The introduction sets the framework: hypermarket retail stores have to cope with a multitude of trends: saturation of the market; competition from other forms of retailing (in particular, hard discounters); the impact of information technology on cash register management and on the flow of merchandise and information; the changing expectations of better-informed consumers who are in a hurry and are fickler; the centralization of purchasing departments, etc. The hypermarket chains must detect these trends and find ways to adapt to them.

The first part of this book sets the scene of hypermarket retailing in France. The reader will be surprised by the size of this branch of the economy in terms of jobs: an estimated 650 000. Human resources are presented as a key factor of success, or failure. Two major trends are seen as determinants: first of all, the

industrialization of managerial procedures for improving economic performance in a highly competitive context; and secondly, owing to this competitive pressure, the reinforcement of the tools for measuring and controlling activities. The four chapters in this first part concentrate on these two trends, which force hypermarkets to experiment with new practices that hesitate between more autonomy for the persons involved and a greater centralization of procedures.

All this is not without an impact on employee involvement in their jobs, a topic explored in the second part of the book. The focus here is on middle-level white collars, who are subject to several contradictions and tensions, which these chapters help gauge. Never fully dispelled at the organizational level, these tensions bear down on employees with all their weight.

The third, and final, part of the book turns toward theoretical sources that have not yet been tapped very often here in France. The aim is to study "what is taking place in managers' heads" and better understand the psychological implications in order to propose recommendations for the staff and for training programs.

What lessons to draw from this book? It fills a gap in academic writings on the management of human resources in hypermarket retailing, not because either of these two terms has been neglected. On the contrary, a significant number of studies in marketing and company strategies deal with mass retailing. As for human resources, research has been developing and even maturing on topics such as recruitment, training, employee involvement and, more broadly, the issues related to the implementation of projects of group cohesion. The gap to be filled was to apply all these theoretical developments in a study on mass-market retailing.

This book's second quality is its openness in terms of approaches and methodology. This is an outstanding quality in an academic world where research is specialized, even comparmentalized in conceptual and methodological pigeonholes. This openness is attested by the variety of authors, methodological approaches, theoretical fields and occupations analyzed. Among the authors contributing to this volume are professionals from mass retailing (Bruno DUFOUR, Jérôme BEDIER) and researchers. This dichotomy is much too simplistic, since several of the researchers have spent years in the field either in participant observation research (for instance, Sylvie SCOYEZ and Jean Yves BARBIER) or in other programs (See Adelina BROADBRIDGE's article).

As for the methodological approaches represented in these pages, the spread of articles offers a panorama of the qualitative research conducted in the field of management: quasi clinical approaches of a psychoanalytic sort, discussion groups and traditional, formal and informal, interviews. The authors all apparently believe that participant observation is the best method for understanding complexity in this branch of the economy and taking into account the ideas of actors in the field.

Reading this book provides us with an opportunity for looking back on well-known topics (for instance, leadership and employee involvement) and extending them theoretically. It opens the doors to a whole body of research on the emotions concealed behind the smiling faces of cashiers and clerks, underneath the apparently excessive involvement of managers in their jobs and underlying the ever improved performance of people placed in a competitive situation. An original aspect is the wide range of occupations in hypermarket retailing that are brought under consideration. We come across all managers at the store

level, in particular "middle management" (supervisors, department superintendents, etc.). These case studies help us better understand the experiences of clerks and supermarket employees. The book raises questions about the role of "trainers" (whether institutions, teachers, researchers or consultants) and sheds light on the complex educational backgrounds of managers-to-be. I might point out that little research has been done on the occupations and assignments of persons in centralized purchasing departments or in hypermarket chain headquarters. The persons working in these departments might gain in autonomy if the trend toward the automatization of processes advances. These departments develop "cultures" and ways of doing things that are sometimes far different from what is observed in stores. It is worth noting that store employees often call these back-office employees "functionaries". Like researchers, the latter say, when they visit stores, that they are "descending in the field". These departments would be a subject of study worthy of a new volume.

In conclusion, this book's major contribution is not merely academic. The authors have tried to propose operational responses for managing the problems encountered in hypermarket retailing: the sales situation, stress inside the organization, emotional dissonance, cultural factors specific to the organization, the staff, the training of white collars and managerial practices that arouse envy.

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LE MANAGEMENT DES RESSOURCES HUMAINES DANS LA GRANDE DISTRIBUTION

À propos de l'ouvrage collectif coordonné par Christophe Vignon : *Le Management des ressources humaines dans la grande distribution* **(Paris, Vuibert, 2009)**

Contradiction et tensions, voilà sans doute deux termes qui représentent une clé d'entrée de l'œuvre étudiée. De fait, l'ensemble des chapitres et articles de l'ouvrage participe à explorer les logiques contradictoires à l'œuvre dans la grande distribution actuelle et les tensions que ces dernières entraînent sur le management des ressources humaines. Le recours à une multitude d'expressions pour décrire ce phénomène de tensions et de contradictions dans les seules pages d'introduction témoigne sans doute de sa centralité. Le coordinateur de l'ouvrage avait, par ailleurs, familiarisé son lecteur à ces questionnements dans une étude précédente, où il renvoyait dos à dos projets humanistes et logiques managériales (VIGNON 2002). Dans ce travail, c'est d'une autre contradiction dont il est question, celle qui pousse les organisations de la grande distribution à osciller entre un projet client et une logique de standardisation industrielle dans les discours et dans les faits. Des contradictions et tensions organisationnelles qui sont renforcées par le contexte actuel, mais qui sont déjà peut-être contenues dans le vocable d'industriels du commerce.

L'ouvrage s'intéresse aux conséquences en termes de ressources humaines des exigences d'un marché à forte intensité concurrentielle et en constante évolution. La question ainsi abordée considère de manière transversale l'implication, la formation, les vécus émotionnels et psychiques des acteurs sur le terrain. Cette recension offre une présentation synthétique de l'ouvrage, puis s'attarde sur les apports et originalités qu'il présente.

L'introduction pose la problématique de l'ouvrage. Les grandes surfaces commerciales font face à une multitude d'évolutions qu'il convient de connaître lorsque l'on s'intéresse aux moyens de s'y adapter : saturation du marché, concurrence d'autres formes de distribution (les *hard discounters* notamment), impact des technologies de l'information (sur la gestion en caisses, le flux des marchandises et de l'information) évolution des attentes des consommateurs (mieux informés, pressés et volatiles), centralisation des achats etc. La première partie s'attache à planter le décor de la grande distribution en France. La principale information interpellant le lecteur est l'importance du secteur en termes d'emplois en France : 650 000 emplois. La ressource humaine se présente comme un des « facteurs clé de succès » (ou d'échec) de cette industrie. Deux évolutions majeures paraissent plus spécifiquement structurer l'exposé. D'abord ce mouvement vers l'industrialisation des procédures de gestion liée à un souci de performance économique dans un contexte concurrentiel difficile. Ensuite, une deuxième tendance, liée à la même pression concurrentielle, consiste pour les organisations du secteur à renforcer les instruments et outils de mesure et de contrôle. Les quatre chapitres qui forment cette première partie s'articulent autour de cette double problématique qui contraint les grands distributeurs à tenter de nouvelles pratiques oscillant entre autonomie des acteurs et centralisation des procédures.

Ces évolutions ne sont pas sans conséquences sur l'implication des collaborateurs. La deuxième partie de l'ouvrage explore ce thème. Les acteurs, en l'occurrence, sont surtout les collaborateurs de l'encadrement intermédiaire dont l'ouvrage tend à démontrer qu'ils sont les sujets de multiples contradictions et tensions. Ce sont ces tensions que les chapitres de cette seconde partie contribuent à mesurer. Tensions qui finalement semblent n'être jamais complètement résolues sur le plan organisationnel et qui pèsent de tout leur poids sur les épaules des acteurs du terrain.

La troisième et dernière partie de l'ouvrage emprunte des cadres théoriques peu développés en France pour s'intéresser à « ce qui se passe dans la tête des managers ». Il s'agit de mieux comprendre les implications psychiques en œuvre afin de proposer des recommandations en termes d'encadrement et de formation.

Quels sont les apports de l'ouvrage ? D'abord, il vient combler une lacune de la production académique sur les questions de gestion de la ressource humaine dans le secteur de la grande distribution. Non pas que ces deux objets ne soient pas traités. On trouve, d'une part, un nombre conséquent d'ouvrages traitant du secteur en marketing et en stratégie. D'autre part, la recherche en matière de ressources humaines se développe et s'affine sur des thèmes tels que le recrutement, la formation, l'implication et, plus largement, toutes les problématiques liées à la mise en place de projets de cohésion de groupe. Ce qui faisait défaut, c'est la mobilisation de ces développements théoriques pour l'étude du secteur de la grande distribution. L'ouverture en termes d'approches

et de méthodologie représente la deuxième qualité du recueil. Dans un monde académique où la recherche se spécialise et s'enferme parfois dans des niches conceptuelles et méthodologiques, il s'agit sans doute d'une vertu notable. Dans le cas présent, cet effort de pluralité se traduit par la diversité des auteurs, des approches méthodologiques, des champs théoriques mobilisés et des métiers qui sont analysés sur le terrain.

Les auteurs d'abord. On retrouve les contributions aussi bien de professionnels (Bruno DUFOUR, Jérôme BÉDIER) que de chercheurs. La catégorisation dichotomique est d'ailleurs quelque peu simpliste, car plusieurs des chercheurs ont passé un certain nombre d'années sur le terrain soit dans le cadre de recherche action en observation participante (c'est le cas par exemple de Sylvie SCOYEZ et de Jean Yves BARBIER), soit dans le cadre d'une expérience précédente (voir l'article d'Adelina BROADBRIDGE).

Concernant les approches méthodologiques, l'éventail des articles offre un panorama assez complet des recherches qualitatives utilisées en management. On y retrouve des approches quasi cliniques de style psychanalytique et des groupes de discussion, ainsi que les plus traditionnels entretiens formels et informels. L'observation participante semble faire l'unanimité des chercheurs de l'ouvrage et apparaît comme la méthode la plus à même d'appréhender les complexités du secteur et d'intégrer les représentations que se font les acteurs du monde étudié.

La lecture des articles est également l'occasion de retours et de prolongements théoriques sur des thèmes connus comme celui du leadership, de l'implication et de l'engagement. L'ouvrage ouvre les portes de tout un *corpus* de recherche sur les émotions ici appliqué à la distribution ; émotions qui se dissimulent derrière le sourire des hôtesses de caisse, derrière l'excès apparent d'implication

des managers, ou encore derrière les réalisations toujours améliorées des hommes placés en situation de concurrence.

Enfin, la multiplicité des métiers de la distribution considérés est un autre aspect original de l'ouvrage. On retrouve l'ensemble des acteurs du management de la grande distribution en magasin, les managers ou plutôt, les acteurs réunis sous l'appellation de « management intermédiaire » (responsables de magasins, de secteur et/ou managers de rayons). La multitude des études de cas offre aussi l'occasion de mieux saisir le vécu des hôtesses de caisse et celui des employés libre service. Le texte permet, enfin, de questionner les rôles des formateurs (institutions, enseignants-chercheurs et intervenants en entreprise) et expose les complexités du chemin d'apprentissage pour les futurs managers.

À ce titre, il faut remarquer que peu de recherches s'intéressent aux métiers et missions des acteurs en centrales d'achats et dans les sièges sociaux de ces organisations de la grande distribution. Pourtant les membres de ces départements risquent de voir leur marge de manœuvre s'agrandir si la tendance à l'automatisation des *process* se confirme. Ces unités développent des cultures et manières de faire parfois éloignées de celles observées en magasin. Il est caractéristique de noter que ces salariés du *back office* sont souvent qualifiés de fonctionnaires par leurs collègues en magasin. Comme les chercheurs, ces derniers ne disent-ils pas, lorsqu'ils visitent le magasin, qu'ils « descendent sur le terrain ». L'étude de ces départements représente peut-être un axe à explorer pour une prochaine édition.

Il semble pour conclure que l'apport principal de l'ouvrage se situe au-delà de la réflexion académique. De fait, les auteurs s'efforcent de proposer des réponses opératoires en matière de management des problématiques rencontrées dans le secteur : situations de

vente, stress dans l'organisation, dissonances émotionnelles, facteurs culturels spécifiques aux organisations, encadrement et formation des managers, et pratiques de management génératrices d'envie.

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THE GAME OF RULES, A MULTIDISCIPLINARY APPROACH

On Hervé Dumez and Jean-Baptiste Suquet's (eds.) « *Les Jeux de la règle », une approche interdisciplinaire* **(Paris, Éditions L'Harmattan, 2009).**

This small book presents lectures made during research seminars, an often enough disappointing type of literature. Attracted by its theme (rules and regulations) and the stated intention of multidisciplinarity, I was extended from the first pages an invitation to a joyous intellectual celebration. The organizer, Hervé Dumez (Centre de Recherche en Gestion at École Polytechnique) launched in 2005 a research program called AEGIS. Besides organizing these seminars (inspired by the CONDOR semi-

nars), he edits an on-line journal, *Le Libellio*, where we find, mixed together, rare scholastic gems, state-of-the-art topics that are clearly thought out, sensible methodological advice for doctoral students, long articles by big names in research, etc.

During these seminars, the speakers and their contradictors addressed nontrivial questions such as "How does methodological individualism account for rules?" and "What is the relation between rules and conventions?" The lectures offered for reading are those delivered by: Raymond BOUDON, a sociologist and member of Institut de France; Olivier FAVEREAU, a specialist in the economics of conventions (University of Paris X); Denis GUALLIGAN, a jurist (at Oxford); Dominique FATTIER, a linguist (University of Cergy-Pontoise); Bernard LAKS, a cognitive scientist (University of Paris X); Jean-Claude MOISDON, researcher in management (École des Mines, ParisTech); and Paolo NAPOLI, a historian (École des Hautes Études en Sciences Sociales). This list by itself evinces multidisplinarity.

Beyond this panel, the success of this book comes from the choice of subjects proposed to the speakers invited to the seminars: the empirical variety and omnipresence of rules, the methodological diversity of approaches, the fundamental epistemological questions thus raised, etc. We are familiar with Jean-Daniel Reynaud's *Les Règles du jeu*. The current book opens a vaster panorama and raises new lines of inquiry.

The editors, Hervé DUMEZ and Jean-Baptiste SUQUET (Reims Management School) have written an introduction that, doing more than the usual summarizing of chapters, provides us with a grid of interpretation for the many problem areas related to rules. For this purpose, they refer, in particular, to Ludwig Wittgenstein (who, we might say, comes to complete this abundant multidisciplinary panel). To provide a glimpse, I would like to quote from this famous philosopher, a quotation discussed in the introduction: "How can I follow a rule? It is either a question for causes or for justifications for my acting the way that I do. If I have exhausted the justifications, I am at bedrock and my spade turns back at itself. I am then inclined to say: 'Thus I act simply.' (Remind yourself that we sometimes demand explanations not for the sake of their content, but for the sake of the form of the explanation. Our requirement is an architectural one; the explanation is a kind of ornament that does not support)." Readers will judge whether the explanations in this book are ornaments that do not support.

Rather than successively summarizing the chapters, each of them dense and rich, I shall present the results of a few soundings made in disorder.

Raymond BOUDON pleads for a "general theory of rationality" that transcends the various forms (utilitarian, cognitive, axiological) assumed by rationality. This theory will free us from verbose explanations involving the "force" of tradition" and "mental frameworks". These ideas are illustrated with examples drawn from major authors, whom we rediscover with pleasure: Tocqueville (Why were the 18th-century English, unlike the French, more inclined to think that what is good comes from tradition rather than reason?), Durkheim (Are rites of magic for making rain rational?), Adam Smith (Why do the English consider it to be an obvious rule that miners should be paid better than soldiers?) and Weber (Why were Roman centurions so easily attracted to monotheistic cults?).

Here is a glimpse of the exchanges with participants in these seminars. "The models you mention are small ones, rather simple, ad hoc. What is their actual scope?" The answer: "Yes, utilitarianism is somewhat simplistic, but it enables us to explain many things in a satisfactory manner. Things often seem trivial ex post facto (See Olson's explanation of the paradoxes of collective action). What is new in science often consists in applying a simple model to situations and facts to which no one had imagined applying it." Another question: "You took part in the work of AEGIS on Social mechanisms [*Le Libellio*, 3-2, pp. 21-24]. Do you think an explanation always appears in the form of mechanisms?" The answer: "To be honest, I am not sure what a mechanism is."

It turns out that another chapter is devoted to a lecture by a specialist on the "mechanisms" of management. Jean-Claude MOISDON refers to the research-intervention programs he has conducted on the changing place of managerial tools in the health system. The proliferation of these tools everywhere (for mathematical optimization, bookkeeping, etc.) and their inevitable transformation into "rules of management" play a key part in the rationalization processes under way. For MOISDON, managerial tools are bicephalous, like Janus: one face is "rules"; and the other, "learning". He describes both faces in the French program for the simulation of hospital systems (Programme de medicalization du système d'information, PMSI), which is used to calculate hospital budgets based on medical activities.

While bearing the PMSI in mind, it is worthwhile mentioning Paolo Napoli's lecture on the emergence of managerial rationality via canon law, which codified the "pastoral visits" initiated by Saint Paul and systematized after the Council of Trent. These visits, conducted with the "instruments" of the period, became a means for literally auditing dioceses. A fascinating analysis of seldom read 15th-century texts turns up unexpected similarities with Fayol, Taylor or Marx.

Olivier FAVEREAU starts with a

classification, both educational and practical, of approaches to studying rules and regulations. By combining "conceptions of individual rationality" (substantial or limited) and "conceptions of modes of coordination" (through the market alone or in combination with other mechanisms), and then the two "logics" of explanation and of understanding, we discover various currents in economics, including "nonstandard theory" (the economics of conventions, Williamson, neoinstitutionalists) as well as structuralist and culturalist streams of thought. After Arrow, in 1971, showed how seriously economists have underestimated the importance of rules, "orthodox economics", surprisingly, staked out new fields of study: legal rules and regulations, social conventions, ethics and morals. FAVEREAU explains how contract theory meticulously dissects the rule for seniority-based wage increases, and how game theory accounts for the adoption of shared rules. Did economists actually build a general theory of rules? No, Favereau concludes, since "the exclusive basis [of these models] on the theory of rational choice and the exclusive basis of the latter on a calculative conception turn out to be mortal weaknesses that bring to light the prob-lem of the impossible completeness of rules." "What new Arrow will dare make a break with the economists' self-satisfaction and see that the king is nude?"

A detour through the rules of linguistics, with the cognitivist Bernard LAKS, brings us back to Wittgenstein's comment on the relations between rules, description and explanation (Making a model of behavior is not the same as explaining it). The difference between an algorithmic view of grammatical rules (as illustrated by Chomsky's generative grammars) and a more dynamic vision (building models through formal networks of neurons, for example) is discussed. Is the "faculty of lan-

guage", as Chomsky has asserted, a function inside the brain specific to the human species? Remaining in the field of linguistics, Dominique FATTIER's lecture on the evolution of language and its rules is both simple and enriching. He examines the case of Haitian Creole from the first contacts with colonists from western France (where *language d'oïl* was spoken). These brief views of the ideas and problem areas encompassed by this book will hopefully arouse curiosity. Readers will have to try to weave for themselves the not always evident relations among all these topics. Ultimately, this book has a key virtue: it makes the reader feel intelligent, a pleasing feeling indeed.

**By Daniel FIXARI,
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« LES JEUX DE LA RÈGLE » UNE APPROCHE INTERDISCIPLINAIRE

À propos du livre « *Les Jeux de la règle », une approche interdisciplinaire,* **Coordonné par Hervé Dumez et Jean-Baptiste Suquet (Paris, Éditions L'Harmattan, 2009)**

Ce petit livre reprend le contenu d'un certain nombre de séminaires de recherche, type de littérature qui peut se révéler décevant. Mais, attiré déjà par le thème, « la règle », et l'intention, « interdisciplinaire », on sent dès le début de la lecture qu'on est invité à une fête de l'esprit des plus réjouissantes. L'organisateur en est Hervé Dumez, du Centre de Recherche en gestion de l'X, qui a lancé en 2005 un programme de recherche baptisé AEGIS, qui, outre le mon-

tage de séminaires (s'inspirant des séminaires CONDOR précédents) édite une revue en ligne *Le Libellio* (1), revue au style bien particulier : on y trouve, mêlés, perles rares érudites, états de l'art thématiques d'une grande clarté, conseils méthodologiques avisés aux doctorants, longs articles de ténors de la recherche…

Dans le livre, le panel d'invités aux séminaires, et leurs contradicteurs, ont pour mission de nous éclairer sur un certain nombre de questions non triviales, du type : « Comment l'individualisme méthodologique rend-il compte des règles ? », « Quel rapport entre règles et conventions ? ». Pour cela on a droit successivement aux exposés du sociologue Raymond BOUDON, membre de l'Institut, d'un spécialiste de l'économie des conventions, Olivier FAVEREAU (Paris X), de Denis GUALLIGAN, juriste (Oxford), de Dominique FATTIER, linguiste (Cergy-Pontoise), de Bernard LAKS, cogniticien (Paris X), du chercheur en gestion Jean-Claude MOISDON (Mines ParisTech) et de Paolo NAPOLI, historien (EHES). Affiche effectivement très interdisciplinaire…

Disons d'emblée que ce qui fait la réussite de ce livre, au-delà de l'affiche ci-dessus, c'est le choix du thème proposé aux intervenants : la diversité empirique et l'omniprésence des règles, la diversité méthodologique de leur approche, les questions épistémologiques fondamentales que cela soulève… On connaît le célèbre ouvrage de Jean-Daniel Reynaud, *Les Règles du jeu* : le panorama qui nous est ici ouvert est bien plus vaste, et permet des questionnements nouveaux.

Les coordinateurs de l'ouvrage, Hervé DUMEZ et Jean-Baptiste SUQUET, de la Reims Management School, ont rédigé une introduction qui va au-delà du traditionnel résumé des

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diverses contributions et donne une grille de lecture des nombreuses problématiques liées aux règles. Pour cela, c'est en particulier à un philosophe célèbre, Ludwig Wittgenstein, qu'ils font appel (qui complète en quelque sorte le panel interdisciplinaire…). Pour juste en donner la saveur, retranscrivons une des citations de Wittgenstein que l'introduction commente : « Comment puis-je suivre une règle ? – Si la question n'est pas causale, elle porte sur ce qui me justifie à agir de telle manière d'après la règle. Dès que j'ai épuisé les justifications, j'ai atteint le roc dur, et ma bêche se tord. Je suis alors tenté de dire : « C'est ainsi justement que j'agis (souviens toi que parfois nous réclamons des explications en raison non de leur contenu, mais de leur forme. Notre exigence est d'ordre architectonique. L'explication est une sorte de fausse corniche qui ne soutient rien) ».

Au lecteur d'apprécier s'il y a des « fausses corniches » dans la suite du livre …

Plutôt que de tenter de résumer successivement les différents chapitres, tous forts denses et riches, présentons quelques coups de sondes illustratifs, dans le désordre.

Raymond BOUDON nous interpelle par exemple en plaidant pour une « théorie générale de la rationalité » au-delà de ses diverses formes : utilitariste, cognitive, axiologique… Elle permet en particulier de s'affranchir d'explications verbeuses impliquant la « force » des traditions et des « cadres mentaux ». Le tout est illustré d'exemples tirés des plus grands auteurs, qu'on revisite ou redécouvre avec un grand plaisir : Tocqueville (pourquoi les Anglais du XVIIIe siècle, contrairement aux Français, tendaient à penser que ce qui vient de la Tradition est bon, et non ce qui vient de la Raison ?), Durkheim (les rituels magiques destinés à faire tomber la pluie sont-ils rationnels ?), Adam Smith (pourquoi les

Anglais considèrent-ils comme une règle évidente le fait que les mineurs doivent être payés davantage que les soldats ?), Weber (pourquoi les centurions romains se sont-ils aussi facilement laissé séduire par les cultes monothéistes ?)…

Donnons un aperçu du ton des débats avec la salle. « Les modèles que vous évoquez sont des petits modèles assez simples *ad hoc*, quelle est leur portée réelle ? » Réponse : « Oui, l'utilitarisme est un peu simpliste, mais il permet d'expliquer beaucoup de choses, et de manière satisfaisante. Et souvent les choses paraissent triviales après coup (Cf. l'explication des paradoxes de l'action collective par Olson). La nouveauté en sciences consiste souvent à appliquer un modèle simple à des situations, des faits, auxquels on n'avait pas pensé à les appliquer ». Autre question : « vous avez contribué aux travaux d'AEGIS sur « Social Mechanisms »(2), pour vous une explication se fait-elle toujours sous forme de mécanismes ? » Réponse : « Pour être tout à fait honnête je ne sais pas trop ce qu'est un mécanisme ».

Justement un autre chapitre est consacré à une intervention d'un spécialiste des mécanismes de gestion, Jean-Claude MOISDON. Ce dernier s'appuie sur un exemple concret, les recherches-interventions qu'il a menées sur l'évolution de la place des outils de gestion dans le système de santé. La prolifération, constatée partout, des outils de gestion (à base d'optimisations mathématiques, de comptabilité…) et leur inéluctable transformation en règles de gestion sont une composante essentielle des processus de rationalisation observés. Mais pour J.C. MOISDON, les outils de gestion sont bifaces comme Janus, une face règles et une face apprentissage, faces qu'il détaille sur le cas du PMSI (Programme de médica-

(2) *Le Libellio* vol 3 N°2 pp 21-24

lisation du Système d'information) et de la tarification à l'activité qu'il a permis d'établir dans les hôpitaux.

On rapprochera avec intérêt cette histoire du PMSI de l'exposé de Paolo NAPOLI sur l'émergence d'une rationalité managériale via le droit canonique, qui a codifié le concept de « visites pastorales », initiées dès Saint Paul et systématisées après le concile de Trente. Ces visites deviennent en fait de véritables missions d'audit des diocèses fort instrumentées. Une analyse, passionnante, de ces textes du XVe siècle peu connus débouche sur des rapprochements inattendus avec Fayol, Taylor, Marx…

Avec Olivier FAVEREAU nous commençons par une classification, fort pédagogique et pratique, des différentes approches des règles. En combinant conceptions de la rationalité individuelle (substantielle ou limitée) et conceptions des modes de coordination (par le seul marché ou aussi d'autres mécanismes), puis les deux logiques d'explication et de compréhension, on trouve alors les divers courants en économie jusqu'à la « théorie non standard » (économie des conventions, Williamson, néo-institutionnalistes…), et les courants structuralistes et culturalistes. Après la découverte par Arrow en 1971 de la grave sous estimation de l'importance des règles par les économistes, on assiste à l'étonnant investissement par « l'économie orthodoxe » de champs nouveaux : règles juridiques, conventions sociales, normes éthiques et morales. Toujours aussi pédagogique, O. FAVEREAU nous explique alors, à titre d'exemples, comment la théorie des contrats décortique méticuleusement la règle de l'aug-men - tation du salaire à l'ancienneté, ou comment la théorie des jeux de coordination rend compte de l'adoption de règles communes. Les économistes auraient-ils vraiment ainsi bâti une théorie générale des règles ? Non, car pour O. FAVEREAU « l'appui exclusif (de ces modèles) sur la Théorie du Choix Rationnel, et l'appui exclusif de celle-ci sur une

conception calculatoire, devient une faiblesse mortelle en faisant apparaître le problème de l'impossible complétude des règles ». « Quel nouvel Arrow osera rompre l'autosatisfaction des économistes et reconnaître que le roi est nu ? ».

Un détour par les règles en linguistique permet, lui, avec le cogniticien Bernard LAKS de retrouver Wittgenstein sur les rapports entre règles, description et explication (modéliser un comportement, ce n'est pas l'expliquer…). On débat alors sur l'opposition entre la vision algorithmique des règles de grammaire, illustrée par Chomsky et ses grammaires génératives, et une vision plus dynamique, modélisée avec des réseaux de neurones formels par exemple. La « faculté de langage » est-elle, comme l'affirme Chomsky, une fonction interne du cerveau spécifique à l'espèce humaine ? Toujours en linguistique, Dominique FATTIER, de son côté, nous présente le problème de l'évolution du langage et de ses règles, dans un mouvement à la fois de simplification et d'enrichissement, sur le cas très frappant du créole haïtien, depuis les contacts avec les premier colons venant de l'Ouest français, où l'on parlait la langue d'oïl.

Ces brefs aperçus de tout ce que ce livre brasse comme idées et comme problématiques devraient donner l'envie d'en savoir plus, et de tenter soi-même de tisser des liens, pas toujours évidents, entre tout cela. Au bout du compte, en tout cas, ce livre a une vertu essentielle, il donne au lecteur l'agréable impression d'être intelligent.

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