

THE AUTHORS



Denis Ettighoffer

is president and founder of Eurotechnopolis Institut and of Virtual Organisation Consulting. He notably wrote *"The Virtual Enterprise, Or The New Ways Of Working"*

Pierre Van Beneden

is Executive Vice-President Worldwide Field Operations of Lotus Development Corporation

THE EXPERT



Jean-Paul Betbèze

is Strategy Director, Economic and Financial Studies Director, and Chief Economist of Crédit Lyonnais Group

Met@-Organizations

The "Plug and Play" Company.

by **Denis Ettighoffer**
and **Pierre Van Beneden**

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KEY IDEAS

The advent of meta-organizations reflects a major strategic reorientation in economic history.

Through the massive introduction of computing networks in companies, notions of place, time and the separating of information have become blurred. We are witnessing the birth of the company model of the 21st century, that of virtual companies being characterized by the development of clusters of companies that are interconnected in the same value chain; the meta-organizations. Meta-organizations constantly oscillate between maximum flexibility and total automation.

Organizational inventiveness has become a key factor in competitiveness

Work on the structures of companies has become a key factor in the creation of value. Partnerships and inventive virtual business models are enhanced by the shareholders and the customers. It is no longer the size of the company which is at stake, but more the quality of the alliances and their total economic effectiveness on the same value chain.

The art of partnership will be the play key role to the creation of value by the "plug and play" company

Companies join up with each other in meta-organizations in order to create value, either by supplying jointly developed and jointly distributed products and services in the form of meta-companies, or by making productivity gains in the form of meta-networks.

“Are we ready for competition through organizational models ?! This is the central question posed by this book, which treats the art of organization as a major art.”



⇒ **Each moment in time has shaped its own company model;** that of the 21st century will be virtual. The massive use of NICT (New Information and Communication Technologies) will enable companies to open up and substantially modify their organization. It is a true revolution in company models which we are now witnessing !

This organizational model has not seen any major theoretical evolution in the last thirty years. Today, we see a self-centred company model, symbolized by the deployment of ERP (Enterprise Resource Planning), that optimizes internal resources, leading us towards either the notion of the virtual company, or an extended one which optimizes its relationships with other entities. These “virtual” companies multiply the number of partnerships so as to concentrate their efforts on their core occupation. In doing this they gain in efficiency and flexibility by creating chains of value that are original and overall more productive.

In order to obtain real productivity gains, it is not a question of making the largest possible investments in the NICT, but rather to think about the organizational forms which should be deployed to benefit from it. The prerequisite for these transformations has been the development and proliferation of computing networks. The application of a global communication's standard between computers, with TCP/IP and HTML, has given a level of inter-connectivity never seen before. This standardization has allowed for an optimization of inter and intra-company operations. The company opens itself up to collaboration by aligning itself to the “plug and play” standards (connect and it works !) of companies on the networks.

⇒ **The growth in the Net-economy due to productivity gains was made possible by the reinforcement of cooperative methods** between the most diverse of companies. Since 1992, these gains have grown in an extraordinary manner in the United States through company alliances : it is there that the pool of productivity promised by the investment in computing was sought by everyone. It is the end of boundaries and it affects all the players in the economy, as they discover the concrete impact of interdependence in their chain

of value. As a result of the rise of intangible factors, the acceleration of trade, and the globalization of it, companies should get away from the constraints of classic economic thinking and start helping each other develop and form networks so as to work increasingly in partnerships. Hence the way forward in the creation of Meta-organizations.

Technological overinvestment has for a long time concealed a lack of thought concerning organizations. While the personnel are sometimes afraid of progress because they consider it as a threat to their job, managers, who were often uneasy in the computing field, attached themselves to out of date models and sought to reform their “processes” without really taking into consideration the movement actually taking place : that being the necessity to consider that competition establishes itself on the basis of the quality of the organizational models.

However, these changes will not be carried out without some degree of pain. The significant resort to technology has led to and, even now, leads to a feeling of mistrust within companies and within society in general. However, a closer look at company models is necessary in order to prepare for the future. In the current context of accelerated transformation of the economic cycles, the adaptation of the organization models is a strategic venture for both companies and nations.

The organization forms of the 21st century

“Today we can determine two major trends relating to the transformation in progress. The first one that we can place under the terms of the meta-company, is to structure the company within the context of the professional virtual communities which have their own values and which develop, in a standard way, an intensive pluralistic cooperative activity, either in their original community or in approaching other ones. Their logic is combinative : we shall also speak about clusters of companies.

The second trend shows a structuring of the complementary activity, strongly integrated into a systemic unit which favours hyper-productivity. Companies slot into the same value chain by using a common information network dominated by a leading player of the already formed unit : these are the meta-networks.”

**Virtualization :
factor in strategic
reorientation.**

The companies which revolutionize their organization will inevitably have a decisive competitive edge. ■ The systemic company enables the creation of new value chains.

It is not enough to be just a good manager, still more it is necessary to have an organization that is not outmoded?! This can be seen in history where nations and companies have seen the importance of establishing new kinds of organization. Charles Quint, Cesar, Sulaiman the Magnificent have all drawn considerable advantage from an original organization adapted for their time. Just like Japanese automobile manufacturers which have, for some time, known how to see off the giant American manufacturers through an enterprising organization of their production. Today, virtualization transforms the traditional economic models. An astute use of networks is already the basis for the considerable and improbable successes of entities such as Linux, DELL and AOL, as well as many others.

The general virtualization of the economy and of business is one of the major point of strategic reorientation. The organizational inventiveness that it favours is otherwise very strongly enhanced by the financial markets. We can also look at the Stock Market valuation of companies

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which innovate in relation to the business model of the Net-economy. The majority of company mega-mergers that we witness do not actually create value. Mega-companies lack organizational and economic transparency as well as having an obvious lack of strategic flexibility.

A myriad of specialized company clusters are formed that reinforce their productivity and competitiveness by grouping into meta-organizations. They do not hesitate in joining together into innovative virtual business models (VBM), by breaking away from the old organizational models in order to achieve decisive strategic advantage. According to several international studies, since 1997, more than 4 out of 10 company managers worldwide thought

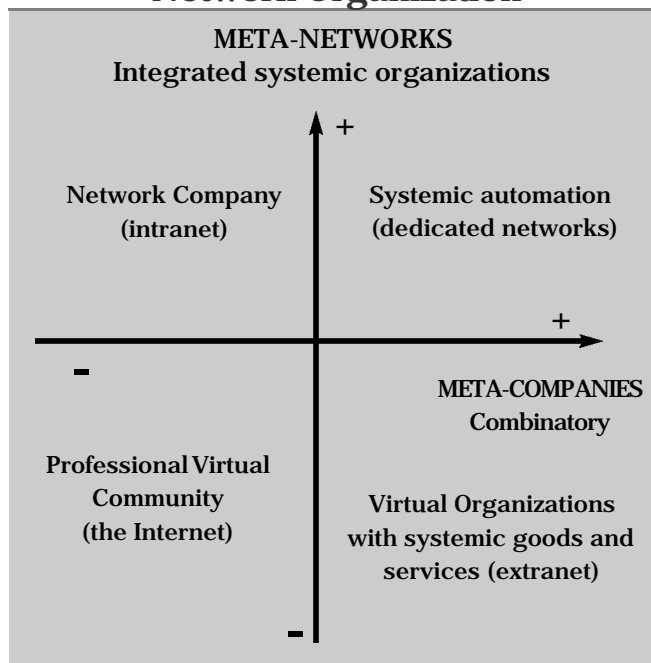
that they should organize themselves into virtual companies before 2010.

☞ **Two options are at the disposal of companies.** The “meta-companies” will build up added value by combining with other companies in order to create new products and services and to compete in new markets. They will be in relationships that are strongly inclined towards collaboration, but weakly inclined towards integration. An example is PSA, a French car manufacturer, which prefers to develop its partnerships rather than integrate its subcontractors. Other companies organize themselves into a chain where they are subjected to each other, but where they can benefit from hyper-productivity. In these “meta-networks,” collaboration is carried out under constraint and integration can be very significant. All of these companies make use of telecommunications in order to reduce their coordination costs, working at just-in-time flows and sharing the management of their operations. This is the case in the textile industry which has put in place a cooperation strategy in order to withstand the low costs of Asian competitors.

So we are now seeing an increase in the number of professional virtual communities composed of individuals and companies having a particular specialization, or a common goal and where they come together in networks. Their objective is to benefit from the increase in outputs, made possible by the pooling together of some of their intellectual or material resources.

By reason of their virtual operating mode, they can quickly mobilize themselves in order to oversee a project or to complete a company team. Consequently, compa-

Network Organization



nies will multiply the transactions with these work units, which can be put together when there is a request to do so and these constitute variable costs rather than fixed ones.

The virtual companies enter into a logic of subsidiarity as this model is the least expensive one. In view of the multiplicity of the tasks to be carried out and the high levels of expertise required, it becomes impossible to optimize all the internal costs. But that is no problem as outsourcing gains in importance, made easier by the performance qualities of the communication networks. The creation of value logic is thus fundamentally modified. Buying elsewhere that which is done better and is less expensive than in its own company, mutualizing the costs and the know-how, developing partnerships in order to orientate from a logic of cost to one of profit; in all of this, there are so many major strategic aspects at stake that the order of things may well be changed. Indeed, we start from a process of traditional buying and selling to an organization of joint-companies in which one should choose the right partners.

In this fight, the companies best armed will be those which are capable of attracting the best specialists to their professional community. In order for that to happen, they must know how to share and exchange their knowledge in both an economic and effective way. The company of the future will be a joint-company. Better still, it will be an alliance of companies grouped together in a meta-organization.

☞ **Schematically, three types of virtual organizations can be distinguished :**

- Companies with weak integration and opportunist collaboration which mutualize their energies on an ad hoc basis : **professional virtual communities** of artisans or organizational projects, for example the organization of an event, shows, sporting competitions, etc. They are found in the specialized market place on the Internet and Usenet.
- More positively, **meta-companies** use the networks in order to create collaboration orientated clusters which include several partners from the same sector, for example the Airbus Group, the online broker Charles Schwab...The tendency in the future will be to make sure that the customer is integrated into the professional community thus created. They will be associated with intranet or extranet platforms, or even with BBS (Bulletin Board System).
- Finally, strong integration in **meta-networks** with an



intelligent and integrated network system. It is backed up by the deployment of large ERP, to automate the systemic functions of the company due to its “info-organizational” programmes.

The development of meta-companies

Companies in the future will be chains of organizations. ■ They will be joined together into more productive and more reactive communities of virtual companies.

The first two types of systemic organizations exploit the capacity to seize any commercial opportunity, thanks to their great flexibility. With the acceleration in the processes relating to the creation and destruction of companies, “disposable,” companies and “transitory” organizations could see the light of day. The principle of subsidiarity thus makes sure that the best in each segment of the value chain is retained and becomes a joint contractor and partner, than a subcontractor. If it weakens or deteriorates, then it is simply replaced.

It is not surprising to find that SMF (Small Medium Firms) and VSC (Very Small Companies) are in the best positions to create meta-companies, joining together in clusters in order to modify their economic plan. Indeed, being both flexible and opportunistic, they do not hesitate in forming partnerships to satisfy their customers, as with the example of the network affiliated to Sodip. This is a network of accountants which, in 1995, grouped together some 258 independent offices in 50 countries. Today, linked to the CMPS American network, it represents some 4 700 associates and accounts for some 250 million dollars.

In the Net-economy, this logic of joint venture is of great importance. Why only deal with a part of the customer’s need? By coming together in clusters, meta-companies offer to the customers products and services, or complementary packages that are an aspect of their businesses and which are adapted as closely as possible to expectations. For example, UPS carries out the after-sales service of Hewlett Packard and the electronic component maker NAS (National Semiconductor) has entrusted its logistics to FedEx. The coming together of both energies and know-how enable companies to respond to demand in a global manner, by saving on precious financial and material resources.

These alliances lead to the formation of virtual industrial districts which center themselves around platforms of

” Meta-networks by-pass the problems bound to Humans become the weak point of the system ”

specialized services. These platforms are quite often the result of the introduction of Intranets, or better still Extranets. They bring together common services (telephone reception, group buying, postal sending and after-sales) and benefit from economies of scale.

The setting up of such systems is rapidly growing due to the possibilities offered by groupware. This concept was introduced by the Lotus Corps, making interconnection with the web both possible and economic, thus leading to the significant reduction in the setting up costs because of “turnkey” services.

The cooperative networks of meta-companies fall into the logic of “joint companies”: joint development in order to economically access techniques and know-how, joint production to obtain economies of scale and to adapt to the demand in real time, or joint marketing aimed at increasing the range of products and to access new markets. In combining these elements the overall value chain obtains increasing outputs!

To arrive at this point, first of all it is necessary to put together a network of companies forming a community which has the same ambition. This community is also a business community. When John Sculley was president of Apple Computers, he was pleased with the contributions made by his partners. Indeed, for every dollar made by Apple, this generated two or three dollars for the partners. Daniel F. Akerson, president of MCI, has said that his policy of alliance with more than 100 companies has enabled him to offer quality products and services while still making a saving of more than 500 million dollars per year.

The art of combinatorial analysis

Companies in the north of Italy have organized themselves into industrial districts for some time now. Myriads of small but highly specialized companies, increasing their partnerships, have intrigued analysts because of their success.

The strategy of Benetton is based on an original federal system. The conception, production and the distribution of clothes are all decentralized. A community of more than 2500 work jointly together and form a network which is very well organized around Benetton.

This art, to astutely combine the talents and resources of a multitude of partners, is one of the major stakes of the meta-organizations.

☞ **What is required for the creation of a meta-company ? Cited amongst other factors :**

- ☛ Finding the right people, the right partners and, for that, there is a need to invest in a management structure of participation and partnership.
- ☛ Encourage people to participate in the network by offering open and attractive projects that mobilize a business community.
- ☛ Use, as much as possible, the effects of leverage and intermediaries offered by the networks by developing a strong culture of cooperation.

In this weakly integrated system, the quality of the relationship between partners and customers is essential. Confidence, openness, organizational inventiveness and a certain amount of opportunism are important factors. The projects are no longer linear, but they are in a permanent state of change.

Whatever the virtual business model established and chosen in common might be, it must change the established plan by offering real added value to the customer who is propositioned to enter into the economic model !

From meta-networks to intelligent networks

Systemic companies are hyper-productive. ■ They structure themselves around standardized computing applications which are like “ready to use organizations.”

Indeed, certain companies do not stop there. To become a systemic company involves choosing to integrate itself even more, so as to attain the hyper-productivity stage demanded by the financial markets and the consumers. With this intention in mind, they are expected to meet around the same communication system, often dominated by an important player from the same sector.

☞ **Meta-networks automate to a maximum the treatment AND interpretation of the information moving about between companies.** This system saves on time and avoids mistakes but involves human intervention, this being the weak point in this type of organization. It is the overall logistical chain which is affected. In a meta-network, it is not only possible to optimize the internal resources of a company but also, and more importantly, the flows between systematized companies. The network has become intelligent, self-adapting, self-managing and it also improves commercial interfaces.

The productivity of these systemic organizations is quite a bit higher to the sum total of the gains that will be achieved by each unit taken separately. To do this, the meta-network makes use of large information systems in order to be able to trace both the product and the information all the way along the logistical chain, therefore obtaining competitive advantage. The GPS or bar code systems allows for real time management in the forwarding of goods. The increasing automation of the marketing and business functions makes it possible to follow the cyber prospects and customers in order to get to know their desires and to make a suitable commercial offer to them. These systemic predictions are provided through the use of intelligent tools. They consult and examine the scattered data, class it by subject matter and then restore it in an organized way so as, according to Jeff Papows, the managing director of Lotus, "to bring to the right people, at the right places, the right information."



☞ **In view of the software complexity inherent within the network's organization** and also for the necessity to conform to optimal "standards," several "turnkey" systems came onto the scene. Initially, their characteristics had incorporated a lot of organizational intelligence. That is to say applications, which automatically included a model and a standard description of a sales service for example. In other words, if in the past companies were forced to develop specific applications, then the current tendency is rather the sale of "info-organizational" bricks, software packages of limited impact but with a more flexible use. "Turnkey" delivered and strongly configured these solutions and can be used in the SMF and SMI (Small and Medium Industries) that want "to connect" on the network. They are economical, compatible and simple: they enable companies to "plug and play!". This is the case with the ERP of the mySAP type.

Nevertheless, the standardization constraint concerning the different modes of communication tends to give growing influence to software producers, to the company which dominates the meta-network or again to telecommunication companies that control the flow of information. It thus seems that the price to be paid for hyper-productivity is a relative but inevitable loss of independence and flexibility

The "key Ideas" and "Summary" sections are intended to be the most faithful presentation possible of the ideas and reflection of the author of the original book, without any form of critical interference. These sections, which are original descriptions for which we are wholly responsible, are intended as summaries: they are neither extracts from or a bridged versions of the book by D.Ettighoffer et P. Van Beneden. We recommend you to read the original book.

Creation and management of virtual organizations

Meta-organizations imply the rethinking of management. ■ The differentiation will come from ever more original business models ■ Companies and nations should work on them.

These new organizations imply, of course, the rethinking of management. Though being under pressure to automate management, the functions left to manual over-

seeing are reduced, with the risk of us being cut off from reality. Those in charge of the company must constantly arbitrate between "soft organization," which favours cooperation, and "hard organization" which encourages not only hyper-productivity but also the use of both complex and fragile systemic automatisms.

The virtual organization is often considered as mercenary. Not only are skills used in these virtual organizations, but also various kinds of resources. The company is no longer a sacred enclosure, but the link in a value chain in which it inserts itself in order to be merged into a professional community.

However, this is different for the person in charge who must not only learn how to distribute the margins, fix the price of a product, organize the communication, but also be aware of who has the ultimate authority in a meta-organization. The companies develop a structure themselves, in relation to the problems met, the particular sector and skills. Integrated management responds to this phenomenon of polyactivity which is demanded of both organizations and employees.

☞ **It is necessary to know how to create this distinctive model.** The leaning is towards integrating the market and the customer into this chain, which is becoming a true ecosystem. For this it is necessary to keep an ear to the ground : to listen to other contractors first of all, by

WORDS OF THE AUTHORS

"By modifying the structures of the organizations, it is a question of reducing resistance (loss of time, psychological and relational curtailments, technical and human dysfunction...) in their current operation."

"With the reduction in the cost of transactions and coordination, made possible by telecommunications, the effective size of companies can decrease."

building in the real and virtual worlds both solid and adaptable entities. Then to customers, by taking part in the value chain, for example in the development of products or through sharing out the productivity gains with them. Finally to the personnel, who remain the most important resource for the company and the keystone of any changes in the company. At the same time, the company will learn how to use the leverage of the professional community in order to impose its model.

☞ **New managerial logic will lead to competitive advantages :**

➤ End of the Gosplan. It is necessary to restore tactics and the opportunist reactivity relating to strategic theoretical considerations.

➤ Preserving the autonomy of the players. Using the networks, to establish integrated management which thinks on a global scale and acts locally to collaboration type concerns and by using the powerful Intranet system as an integrating type element.

➤ Becoming a relational company. The intangible economy is one of desire : your employees have the desire to work and indeed to work with you. They are more likely to have the most contact with the customers and the suppliers, therefore being in a better position to form the right relationships in order to help develop profits.

➤ Knowing how to detect new trends about your markets from "small murmurings," and little disturbances in the normal environment. The data crunching by machines facilitates anticipation and enhances the ability to act quickly : with the condition of being associated with a good information network.

➤ To virtualize its organization. The evolution in development strategies in the Net-economy will herald the end of models. To act quickly, it is necessary to be always on alert to the VBM which makes progress and adapts very quickly there.

➤ Limiting the logistical cost endured by the customer. This is the problem of companies that pocket the productivity gains without sharing them with the customers.

☞ **The evolution in differentiation strategies has been made necessary with the arrival of the Net-economy.**

To enhance the value of the company, it is important to differentiate both for customers and with regards to the shareholders. The creation of an original and powerful VBM is certainly a major asset. But in the Net-economy, the abundance of information can lead to risk for the company, which could significantly lose out. If previously you only had a mere minute to capture the attention of a potential customer, then with the Internet you only have 8 seconds. It is not only advisable to use computing techniques, but also to form with the consen-

ting customer a true relationship which is both frequent and personalized. This relationship will be all the more advantageous since the company would have staged itself and put forward the values shared with the community of customers and suppliers, and would so have formed around itself "a community of emotion."

Lastly, let us not forget the shortcomings that are involved with too large a dependence on technology and the systemic risks of malicious intent from competing meta-organizations or even hackers. We can neither plan for all of them, or prevent all of them from happening. So to avoid "crash management" the question which we should ask ourselves is : what would we do in the event of a breakdown ? Catastrophic scenarios must be listed and solutions found immediately for these.

☞ **Are you ready for competition through organizational models ?**

In the virtual company, which is set up on electronic networks, man seems to be once again losing ground to the machine. But this is not omnipotent. It can be affected by the chance or by an unforeseen event. Moreover, it can only function according to pre-established plans and not by reinventing any because of the differences with man, who is freed from certain material tasks and who will concentrate on developing organizational inventiveness. But, the one elaborate thing, above all, which the machine is incapable of doing is developing relationships with others!

John Key, a consultant and professor of economy at the London Business School, points out that competitive advantages are found on the battle field and not in the head quarters. The companies of the future must change their method of organization and reduce in size so as to be in symbiosis with one and the other. They must not only be more reactive, but also more partnership orientated by basing themselves on the intelligence networks that have been set up all over the world.

So, the authors insist on ending with the limitations of a company model too dependent on computing automatisms. They prefer partnership based models of the meta-company type. They conclude by paraphrasing Machiavelli "if half of our destiny is random, we should not let computers deal alone with the other half!"

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Les modèles d'entreprise créateurs de valeur."
by Denis Ettighoffer and Pierre Van Beneden
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There is something slightly strange about this book. It should not be read, but rather reread again ! In fact I read it and found it interesting, even well written, with ideas that I appreciated a lot on the effects of the new economy, along with well chosen examples and anecdotes already seen in other works of Denis Ettighoffer. They are clearly good authors who obviously know their subjects. Then, as it is quite often the case, I came across other texts, other ideas and other problems. Until I look at this book again and see, after all that has happened with the Nasdaq, after all that has been said about the success and failure of long established and recently created companies, after the debates on the business models and, especially, after all that which is now feared in the United States : a great crisis of overinvestment.

However, it is all this that we find in this book, in fact rather too modest – that which is rather infrequent in the literature related to the new economy. There is an explicit argument that the essential is not in the size of the memory or the speed of the equipment, but in getting through to the heads and organizations.

From where this shock on page 45 comes from : this technological overinvestment which has concealed a lack of thought on our organizations of the future. Already on page 21, the authors have warned us : the last thirty years have not seen significant conceptual progress in terms of the organization. Let us acknowledge the esteem that we have for them, this kind of phrase being more difficult to convey than to write !

However, the interesting aspect of this book is to work to show that it is necessary to organize men differently and, above all, if we want to achieve that which promises and allows for technology. From where this constant idea comes from, taken up, developed and backed up through many examples like sharing, exchanging, by communities, by virtual organizations and contributing networks of virtual communities (p.152). It also comes from the fact that man is the weak point in the meta-networks... that, with the intelligent networks, what is at stake is the detection of the logic hidden in front of everybody (p 214).



Jean-Paul Betbèze

Strategy Director,
Economic and Financial
Studies Director,
Chief Economist of
Crédit Lyonnais Group

Mét@-organizations

This leads the authors to formulate a series of particularly invaluable pieces of advice : when we read page 245 on the new way forward for the manager, we see the necessity to move away from the traditional tools of managing, to absolutely simplify the organization, to delegate at the grass-roots level, to have an ear open to the rumblings of discontentment and to increase the sensors which capture these rumblings.

This obviously encourages new relationships with the customer, personnel, communities and leads to the development of unified management.

It is over the last few pages that it has become necessary to ponder because it is now a question of how to change and use these comments and ideas.

That is why, at the beginning, I spoke about rereading, as the task of changing is not frivolous and can be the most complicated thing to do.

There are no answers in kit form, like is frequently found in the task of giving small pieces of quite often irrelevant advice. But it is essential to participate in a thought process on the deep changes which are needed in the organization in which we are a part of, with the idea that they would be far better coming from the inside, under outside pressure of course, because when there is a problem with these changes it could be far too late. It is from there that the idea comes, when thinking about the pages which deal with the economy of attention (p.282) or the management of tensions and crisis (p.285). The book concludes from an overall perspective, on the way in which countries plan, or indeed do not plan, to create or attract new organizations.

It ends in the pressing question for all : how long will it take in order for the idea to enter into the minds of the managers that competition between organizational models is as important as economic management? But I say to you, in all honesty, that the reading of this book, in taking time over it, enables us to reduce it – to the parts which are of interest to us.

JEAN-PAUL BETBÈZE