

# Issues in Regulation Theory

N° 47

January 2004

## CONTENTS

- 1-4 Theoretical note
- 4 Publications
- 5 Announcements

## EDITORIAL

Should the firm be considered one of the structural forms of capitalism? Through a historical approach which brings out the successive forms of management, Armand Hatchuel suggests that the company is not simply the counter-market but a key institutional innovation that shaped capitalism and its regulation. The issue is both theoretical and political, insofar as firm and management models are profoundly marked by the dynamics of capital and its players.

<http://www.theorie-regulation.org>

Issues which are not available for downloading can be obtained by contacting Catherine BLUCHETIN [catherine.bluchetin@cepremap.cnrs.fr](mailto:catherine.bluchetin@cepremap.cnrs.fr)

## THEORETICAL NOTE

### Rethinking management

#### A historical look at firms as institutional innovations

Armand Hatchuel (École des Mines/Fenix Center, Chalmers, Göteborg)

[hatchuel@ensmp.fr](mailto:hatchuel@ensmp.fr)

The last third of the twentieth century saw the emergence of a new world as computer science, new means of communication and biotechnologies drastically transformed the landscape of science and engineering. Training and research became major factors of growth.<sup>1</sup> Social welfare systems (and pension funds) boosted the expansion of the worldwide financial markets. Lifestyles and values underwent veritable cultural revolutions. *Such upheavals could not fail to have an impact on the foundations of management and the firms.* The recurring crises in corporate governance and the proliferation of debates over the role and wages of company heads are only the most visible signs of a much more widespread *aggiornamento* of management principles.

Three major revolutions have marked the history of management: the birth of the Italian *compagnia*, the manufactures of the Industrial Revolution and the Fayolien-Taylorist movement within the "modern company".<sup>2</sup> Our argument here is that today, such a heritage has been destabilised, not by the pressures of the financial markets alone, as is often maintained, but by the dilemmas resulting from the combination of these financial pressures and a competition system now based on 'intensive innovation'.

This 'pincer effect' on the firms paves the way for a management model which might be termed 'neo-*compagnia*' by virtue of its resemblance to its Italian ancestor. But this model regenerates many pernicious effects because it neglects the collective learning ex-

periences which are necessary for intensive innovation. Alternative management models may be identified, but in the face of such unprecedented challenges, considerable research is still necessary. Nonetheless, today's crises bring out the major management innovations which forged corporate capitalism.

#### **I - The three 'revolutions' which shaped the modern company**

What is a firm? What is management? These seemingly basic questions in fact reflect changing realities. The Genoese or Venetian *compagnia* of the Renaissance were not run like twentieth-century companies. The Italian merchants could not have imagined that the entrepreneurs of the Industrial Revolution would be philosophers and scientists, just as the latter could not have anticipated that today's firms would be nearly as complex as State structures. The disparate histories of these 'collective businesses'—which we call *firms* or *entreprises* for the sake of convenience—show that they were neither emanations of the 'market' nor the incarnation of a single rationale. Thus, management cannot be conceived as a group of universal techniques but rather, a historically specific movement of renewal and rationalization of the institutional artifacts of collective action. Indeed, a contemporary start-up draws on practically the entire history of management innovations and clearly reveals the traces of the three major historical strata underlying modern management.

#### **1) The Italian *compagnias*: from the merchant collective to bookkeeping.**

Most of the fundamentals of trade were well established at the end of the Italian Renaissance. By the Middle Ages, the towns hosted and regulated a mercantile activity whose complexity stimulated innovative forms of association. The business collectives (*compagnias*) which flourished in northern Italy with the Renaissance (Origo 1957, Favier 1987) became a highly imitated 'management model'. *Serving as an institutional reference for the emerging economic thought, this innovative practice thus gave rise to the*

<sup>1</sup> This trend has been popularised through the notions of the 'knowledge society' or the 'economics of knowledge'. See the special issue of Unesco's *International Social Science Journal* n° 171 (March 2002).

<sup>2</sup> The history of management innovations is obviously much more complex and what is presented here must be taken as a limited description of the revolutions which had a strong international impact on the entire business fabric.

*idea of the firm*. Indeed, how could an economic activity take place without a management model?

The first *compagnias* were made up of family members or friends but they subsequently extended beyond personal ties. They were limited in their life spans and areas of activity alike. When new business opportunities presented themselves, each member could negotiate his participation, within a framework which was at once collective and individual. The *compagnias* also set up a system of regular mail services (Origo 1957) because the rapid transmission of information was vital to them. Business activity thus assumed a legitimate, rationalised form where knowledge determined the rules of action and action contributed to learning and trust (or distrust). This concept of *rational collective action* prepared for the development of 'scientific logic' and social rights. Thus, in his description of double-entry accounting (in a 1494 treatise on arithmetic), Luca Pacioli conceived of market exchange as the permanent balance of reciprocal rights ('debits' and 'credits'). With the introduction of bookkeeping, the flow of goods (or capital) was accompanied by a flow of *verified knowledge with institutional effects*.

## 2) The management of the manufactures: corporate bodies and engineering departments.

The *compagnias* depended on the craft guilds to produce the goods which they subsequently sold. The process which led the 'entrepreneurs' to design and build manufactures spread over nearly two centuries. If the French manufactures of the seventeenth century were intended to support the craft activities, the English manufactures of the eighteenth century benefited from the new machine production. Textile manufacturing thus enjoyed unprecedented economies of scale and time, while smiths, potters and dyers developed new innovation logics (Berg 1994, Schofield 1963). The techniques of accounting and trade remained necessary for running these manufactures, but bookkeeping could not anticipate production costs and capacities. Control, design and planning became new territories for management.

During the nineteenth century, manufacturing companies benefited from the invention of the 'corporate body' which gave them a unified, legally responsible status. The old principles of the *compagnia* were not adapted to the new 'bosses' and new personnel of these entities. Meanwhile, through their union struggles, the workers reinforced the status of the manufacture as a new institutional framework for collective action, and this representation was to determine in turn the regulatory role of the public authorities.

The manufactures also offered the possibility of unprecedented learning experiences, with better opportunities for research and experimentation. New approaches to accounting and quality control were introduced (Parker and Yamey 1997), and systematic organisation, logistics and technical improvements incarnated the modern principle of rationality.<sup>3</sup> The new industrial leader was no longer a merchant but rather, an enlightened empire builder who created new products, new factories and new jobs. The discourse of political economy praised the 'entrepreneurs' or denounced the social disequilibria embedded in the new "industrial relations".<sup>4</sup>

<sup>3</sup> From 1750 to 1850, many of the most famous manufacturers were also members of the prestigious philosophical and scientific societies of their time (Schofield 1963).

<sup>4</sup> At the same time, however, the management principles of industrial manufacturing were more likely to be described and discussed in engineering manuals or dictionaries of arts and

## 3) The foundations of the modern company: the Fayolian-Taylorist heritage.

It was only at the beginning of the twentieth century that the basics of 'modern management' were elaborated by Henri Fayol and Frederick W. Taylor. The two men were neither economists nor entrepreneurs but engineers who became company or factory managers. Fayol belonged to the very first generation of engineers gaining access to management posts, previously reserved for owners. He described management as an overall process of administration requiring appropriate information, a variety of skills and a capacity for coordination. These were elements which the boards of directors and major shareholders no longer mastered and which, according to Fayol, called for a new kind of manager. Taylor's contribution came from a different perspective. He began by criticizing the traditional wage system inherited from the *compagnia* model (Taylor 1895), where workers, like merchants, negotiated piece rates with their foremen. Taylor was against these market compromises within the company. For him, work and payment rules should result from scientific studies carried out by specially commissioned experts. Although Taylorism was highly criticised, it popularised the idea that all industrial work required research and proven methods.

In spite of its market vocation, the company was thus becoming a *collective with explicit regulations based on recognised expertise*. The bond between employers and employees was no longer limited to a strict hierarchy or a simple contract. Hiring no longer meant buying labour power; and holding a job required learning the rules and methods defined by the company. And this conception—which was consistent with the emergence of the company as a locus for technical and institutional development in modern societies—won out. After the Second World War, it was almost natural for management, design and R&D to become strategic activities for the large corporations. And at that point, we are no longer in 'market economies', as is too easily stated, because all the market societies known to history have not produced the same revolutions in management. Indeed, it is only at the end of the chain of revolutions just evoked that, in spite of numerous differences from one country to another, the West entered a particular system—a corporate socio-economy—where the firms became sites of both innovation and social struggles coming under the regulation of public authorities. At the end of the 1980s, with the failure of the State-run economies of the Eastern bloc, it became clear that there was no alternative to this corporate socio-economy.<sup>5</sup> But this situation did not mean the end of the history of management, for a new era had already begun and this same management legacy was to be challenged once again.

## II - The dilemmas of contemporary business

During the final decades of the twentieth century, the level of wealth and education in developed societies showed a steady increase. The values of democracy, autonomy and individualism were adopted by a predominant 'middle class' and the number of skilled workers rose in all sectors. At the same time, powerful mass media spread new fashions and rapid changes in habits and values. All of these developments shattered the logics of both consumption and finance, thus de-

industry than in economics manuals.

<sup>5</sup> The absence of management revolutions in the State-run economies is itself worthy of a discussion which we cannot undertake here.

stabilising the traditional relations between employment, companies and customers.

### 1) New consumption logics: a capitalism of intensive innovation

The classical idea that consumption is determined by needs, income and individual preferences has lost ground in contemporary societies. Indeed, advertising strategies, credit systems, brands and opinion leaders (Hatchuel 1995) are now much stronger determinants of consumption, while profound cultural changes have also contributed to the emergence of new social movements promoting environmental issues, gender equality or humanitarian causes. To appreciate the scale of these changes, it suffices to compare a popular car (or hypermarket) of the 1970s with their contemporary counterparts, for the differences in design and equipment are striking. A richer, healthier, better-educated population should have been a windfall for the companies. In practice, it has contributed to a new form of competition based on intensive innovation because *it concentrates market value and profit on new products and services and thus requires constantly renewed supply*<sup>6</sup>. Neither the *compagnia* nor the manufacture model nor even the doctrines of Fayol or Taylor were prepared for this form of competition. And when we add the pressure imposed by the *new mass financial markets*, management becomes an exercise not far from squaring the circle.

### 2) The 'pincer' effect between finance capitalism and innovation capitalism

Increased wealth and social welfare have stimulated the expansion of pension funds and an increase in institutional investors, a situation which has notably contributed to the deregulation of the financial markets. But this spread of mass capitalism has generated *major dilemmas* for the heads of large corporations. Indeed, *it has directly increased the financial pressure on the companies*. The phenomenon became particularly apparent when profitable companies began downsizing with the sole aim of improving their shareholder value. At that time, recurring debates over corporate governance and business ethics brought out the obsolescence of existing institutional models for top management practices. The Enron/Andersen affair will probably remain a landmark in this most recent history of management. But beyond the scandals, a new 'iron law' has come into being. Shareholders want company management to guarantee short-term financial returns. A drop of a few percentage points in expected earnings can have a major impact on stock prices and the company's rating. And stock prices also determine the risk of a hostile takeover.

*Under such conditions, innovation and R&D are expected to yield high, fast returns while guaranteeing the firm's competitiveness and its long-term survival.* Innovation policies are not simply a matter of investments, however. The classical notion of the investment does not take into account the collective learning processes which are required for rapid renewal of products and services. Indeed, an innovation strategy is not a one-player game. Decisions cannot be totally planned in advance; skills are developed over time and require co-ordination between many different players. Innova-

tion programmes involve teams and partners in *complex exploratory efforts* requiring a combination of tactical flexibility (knowing how to react quickly to the market) and more long-term learning. And innovation processes necessarily have multiple and often interrelated time frames. Thus, the combined demands of the financial markets and innovation capitalism exert an unprecedented "pincer" effect on the firms. As this double pressure has gradually eroded the legacy of classical management, a '*neo-compagnia*' model has become particularly attractive.

### 3) The temptations of a 'neo-compagnia' model.

In its principles, this model recalls the ancient *compagnia*: the company is once again reduced to a group of market contracts and is, wherever possible, supposed to limit itself to co-ordinating external providers. Indeed, this is what the notion of 'Network Company', which has generated a great deal of literature, is about.<sup>7</sup> The supposed advantages of this model are its robustness in turbulent markets and its flexibility in the acquisition of new technologies. Since such a vigorous outsourcing strategy is not enough to organise the firm (Miles and Snow 1986, Jarillo 1988), project-based organisations or 'business units' are recommended for its internal operations. And the same philosophy of atomisation is defended both within the firm and at the scale of a network of partners. Each unit is supposed to be a 'profit centre' or a 'quasi-firm'. The same is true for human resources, where flexibility is considered to be vital. Personal development is still encouraged but the idea of a career no longer seems realistic (Hall et al. 1996); each employee is seen as an 'entrepreneur' who remains free to choose between staying in the company or moving on. Good corporate governance, meanwhile, is held to depend on close control of managers, independent administrators and outside auditors who are completely separate from the firm's consultants. *It is as if the revolutions of the manufacture and Fayolo-Taylorism no longer defined the company's institutional substance.* This *neo-compagnia* is seducing many of today's company managers, shareholders and financial analysts. It is supposed to provide certain flexibility in the firm's boundaries, favour quick acquisitions or downsizing and give a clear picture of the profitability of each of the company's activities. This model *undeniably satisfies the demands for the control and visibility of financial markets*. In spite of its seductiveness, however—and this is the dilemma—it is not adapted to the innovation processes required by today's competition.

### 4) Alternative models: product lineages, platform leadership and socio-economic orders.

The main and sometimes fatal weakness of the '*neo-compagnia*' model is that it threatens the management of learning experiences and the collective work which are necessary to contemporary innovation. Even when the model seems to 'work', real practice differs from its principles, and those involved in network industries have to struggle against the pernicious effects of this kind of organisation (Park 1994). There are, however, alternative management models which propose robust strategies of innovation and cooperation. These feature several new management concepts: the creation of product 'lineages', the formation of common 'platforms' and the voluntary establishment of inter-company standards.

The automobile and high-tech industries are often

<sup>6</sup> On this phenomenon, which we have termed 'intensive innovation-based competition', see Hatchuel, Lemasson and Weil (2001, 2002). The transfer of production towards countries with low labour costs is also a part of this form of competition because, in the case of a wide range of products, low prices facilitate the rapid renewal of supply and solvent demand.

<sup>7</sup> Frery (1997) indicates that he has found more than forty terms used to designate the same idea of a company made up of a network of companies.

considered good examples of the 'network industry' favouring project-based organisation and outsourcing. But the companies in these sectors have also discovered the limits of such organisations and notably their counter-performances in situations where innovation calls for synergies and interdependencies—in other words, strong *horizontal* co-operation between activities or projects. The recent spread of 'platform' policies in automobile manufacture and new technologies (Gawer and Cusumano 2002) clearly demonstrates the limits of the 'neo-compagnia' model. These strategies reveal the necessity of comprehensive leadership logic within the network, a leadership which is capable of channelling innovation both within and outside the company.

Similarly, if we look at companies with sustained success in innovation (Hatchuel, Lemasson and Weil 2001), we observe that they develop long-term learning through the design of 'product lineages', which are series of products depending on a common core of incremental, interrelated competences. The aeronautics or pharmaceuticals industries offer examples of such 'product lineages' and the success of a consortium like Airbus is a good example of collective inter-firm learning which is guaranteed by a stable division of labour and decision-making between partners. These strategies show how today's innovating company can encourage fields of exploration and shared developments among its partners, thus giving rise to a common 'conceptual infrastructure' which sustains the growth of a large group of activities. The management of this 'shared fields of innovation' (Hatchuel et al. 2001) organises internal and external synergies which permit learning continuity. And the more innovation is repeated, intensive and vital, the more the firms need to develop *points of reference which are common to the different production units and collective processes for the production of knowledge which remain relevant even when they are in competition*.

These challenges are particularly hard to meet within the 'neo-compagnia' framework, for this model, by its very nature, targets results measured at the level of each business unit and *neglects the interdependencies and collective learning experiences* which generate value and performance. By contrast, the alternative management models both *extend and renew the Fayollian-Taylorist heritage* by adapting it to a system of competition through innovation. They do not rely on a network logic aimed essentially at 'atomisation', but, beyond contracts and the division of labour, they seek above all to institutionalise *socio-economic orders which are common to several companies* (Aggeri and Hatchuel 2003), in other words, *shared quality standards, cross-learning and innovation-sharing policies*.

#### **Conclusion: The invention of new management models as an institutional challenge.**

Today's dilemmas thus call for fundamental changes in company management. The 'neo-compagnia' model is maintained by the stock markets and the shareholders' concern for control. But this model is already revealing its weaknesses, and not simply because it encourages opportunistic behaviours within the units of the network (Goshal and Mohan 1996), for such behaviours have always existed, even in integrated bureaucracies. Rather, what destabilises the 'neo-compagnia' is above all its minimal ability to support innovation-based competition. In addition, under pressure from the stock markets, the 'neo-compagnia' model fosters extreme behaviours: *innovation is either neglected or impatiently developed by force in order to meet the demands of analysts and shareholders*, thus

feeding stock-market tensions and nervousness. In the extreme cases, it paves the way for frauds and accelerated bankruptcies.

Alternative models obviously exist, but the complexity of today's dilemmas is such that further efforts will be necessary in order to renew the theoretical and institutional bases of management. It has never been so clear that research in this area exerts a major institutional influence on the future direction of our societies. What is at stake is the evolution of a capitalism based on the dynamics of the companies, for *we cannot hope that the financial markets will behave differently. Nor can we expect the rhythm and scope of innovations to be tempered*.

#### **References**

- Aggeri, F., and A. Hatchuel (2002). "Ordres socio-économiques et politiques de l'innovation dans l'agriculture." *Sociologie du Travail*.
- Berg, M. (1994). *The Age of Manufactures: Industry, Innovation and Work in Britain, 1700-1820*. London and New York: Routledge.
- David, A., A. Hatchuel and R. Laufer (2001). *Les nouvelles fondations des sciences de gestion*. Paris: Vuibert-Fnege.
- Favier, J. (1987). *De l'or et des épices. Naissance de l'homme d'affaires au moyen-âge*. Paris: Fayard.
- Frery, F. (1997). "La chaîne et le réseau." In P. Besson (ed.), *Dedans dehors : les nouvelles frontières de l'organisation*. Paris, Vuibert-Fnege.
- Gawer, A., and M. A. Cucumano (2002). *Platform Leadership*. Boston: Harvard Business School Press.
- Goshals, S., and P. Mohan (1996). "Bad for Practice: A Critique of the Transaction Cost Theory." *Academy of Management Journal* 21/1, pp. 13-47.
- Hall, D. T. (1996). *The Career Is Dead. Long Live the Career. A Relational Approach to Careers*. San Francisco: Jossey-Bass Publishers.
- Hatchuel, A. (1995). "Les marchés à prescripteurs." In A. Jacob and H. Vérin (eds), *L'inscription sociale du marché*. Paris: L'Harmattan.
- Hatchuel, A., P. Lemasson and B. Weil (2001). "From R&D to RID: Design Strategies and the Management of Innovation Fields." *Proceedings of the 8th International Product Development Management Conference*. Entschede, The Netherlands.
- Hatchuel, A., P. Lemasson and B. Weil (2002). "From Knowledge Management to Design-Oriented Organizations." *International Social Science Journal* 171, pp. 25-37.
- Hatchuel, A., and H. Glise (2003). "Rebuilding Management." In Adler, A., A. Shani and A. Styhre (eds), *Collaborative Research in Organisations*. London: Sage.
- Jarillo, J. C. (1993). *Strategic Networks, Creating the Borderless Organization*. Oxford: Butterworth-Heinemann.
- Miles, R. E., and C. C. Snow (1992). "Causes of Failure in Network Organizations." *California Management Review* 28/3, pp. 62-73.
- Origo, I. (1957). *The Merchant of Prato*. London: Jonathan Cape.
- Park, S. H. (1996). *Managing an Interorganizational*

Network: A Framework for the Institutional Mechanism of Network Control." *Organization Studies* 17/5, pp. 795-824.

Parker, R. H., and B. S. Yamey (eds) (1994). *Accounting History, Some British Contributions*. Oxford: Clarendon Press.

Quinn, J. B., and F. G. Hilmer (1994). "Strategic Outsourcing." *Sloan Management Review* (summer), pp. 43-55.

Schofield, R. E. (1963). *The Lunar Society of Birmingham*. Oxford: Clarendon Press.

(Translated from the French by Miriam Rosen)

Ould-Ahmed, P. "Barter hysteresis in post-Soviet Russia: an institutional and post Keynesian perspective." *Journal of Post Keynesian Economics* 26/1 (Fall 2003), pp. 95-116.

Petit, P. "Evolution du rapport salarial dans le nouveau régime de croissance." In E. Soto Reyes, J. Aboites and E. Ortiz (2003).

Soto Reyes, E., J. Aboites and E. Ortiz (eds). *Estado versus Mercado, Ruptura o nueva forma de regulación*. Mexico City: Universidad Autónoma Metropolitana, Unidad Xochimilico, 2003.

Yefimov, V. *Economie institutionnelle des transformations agraires en Russie*. Paris : L'Harmattan, 2003.

**RECENT PUBLICATIONS**

The following publications are signalled by the editors of *Issues in Regulation Theory* because of their relevance to the research program of the Regulation School.

Andreff, W. *La mutation des économies postsocialistes: une analyse alternative*. Paris: L'Harmattan, 2003.

Boyer, R. "L'avenir de l'économie comme discipline." *L'Economie politique* no. 19 (July 2003), pp. 33-45.

Boyer, R. "Evolving Nestedness But Still National Traditions?" In J. H. H. Weiler, Iain Begg and John Peterson (eds), *Integration in an Expanding European Union. Reassessing the Fundamentals*. Malden, Mass.: Blackwell Publishing, 2003, pp. 197-202.

Boyer, R. "Les institutions dans la théorie de la régulation," *Cahiers d'Economie Politique, Histoire de la pensée et théorie* no. 44 (December 2003).

Boyer, R. "L'anthropologie économique de Pierre Bourdieu," *Actes de la Recherche en Sciences Sociales* no. 150 (December 2003), pp. 65-78.

Bustelo, P. "Enfoque de la regulación y economía política internacional: ¿ paradigmas convergentes ?," *Revista de Economía Mundial* no. 8 (2003), pp. 143-173. <http://www.ucm.es/info/eid/pb/BusteloREM03.pdf>

Chanteau, J. P. "L'économie, une science de gouvernement?" In O. Ihl, M. Kaluszynski and G. Pollet (eds), *Les sciences de gouvernement*. Paris: Economica, 2003, pp. 165-216.

Chavance, B. "Les théories économiques face à la transformation post-socialiste." In M. Forest and G. Mink (eds), *Post-communisme: les sciences sociales à l'épreuve*. Prague: CEFRES-Dokoran, 2003.

Coriat, B. et al. "Intellectual Property Rights, Anti-AIDS Policy and Generic Drugs. Lessons from the Brazilian Public Health Program." In J. P. Moatti, B. Coriat, Y. Souteyrand, T. Barnett, J. Dumoulin and Y. A. Flori (eds), *Economics of AIDS and Access to HIV/AIDS Care in Developing Countries. Issues and Challenges*. Paris: ANRS.

Litviakov, M. *Monnaie et économie de pénurie en URSS*. Preface by Michel Aglietta. Paris: L'Harmattan, 2003.

Maurel, M.-C., M. Halamska and H. Lamarche. *Le repli paysan: trajectoire de l'après-communisme en Pologne*. Paris: L'Harmattan, 2003.

Moureau, N., and D. Rivaud-Danset. *L'incertitude dans les théories économiques*. Paris, La Découverte, 2004.

Join the "Recherche & Régulation" association  
By sending your annual dues to the treasurer

"Recherche & Régulation"

If you wish to be informed of the posting of *Issues in Regulation Theory* (or that of the French-language *Lettre de la Régulation*), please send your e-mail address to Catherine BLUCHETIN at CEPREMAP [catherine.bluchetin@cepremap.cnrs.fr](mailto:catherine.bluchetin@cepremap.cnrs.fr)

These two publications are financed by contributions from members of the Recherche & Régulation association. **The membership dues for 2004 are 40 € (16 € for students)**. This fee also entitles members to receive **volume 7** of the annual review **L'Année de la Régulation** (in French only).

✂ (Print out and cut along the dotted line)

.....

Last name .....First name.....

Institutional affiliation  
.....

Postal address  
.....

E-mail address  
.....

Enclosed is the sum of ..... Euros for my 2004 membership dues.

I wish to be notified of the posting of:

*Issues in Regulation Theory*

*La lettre de la régulation*

Checks or international money orders (euros only, please) should be made payable to:

"Recherche & Régulation"

and sent to the treasurer of the association:

Pascal Petit, CEPREMAP

142 rue du Chevaleret

75013 Paris – France

<http://www.theorie-regulation.org>