

Georges Perrin and the GP cost calculation method: the story of a failure

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Abstract: After World War II, different methods were developed to reply to certain limits to the homogeneous section method. The common point of these methods is to provide a more accurate analysis that remains easy to apply. The GP method developed by Georges Perrin is the one that was the most successful. However, despite its advantages, it is surprising that this success was not greater.

INTRODUCTION

Although extensive writing exists on the success of scientific discoveries and innovations (Rogers, 1995, Flichy, 1995), little work has been done on the success of tools of financial management. There are however two active trends of thought in the history of accounting¹ and fashionable in the field of financial management tools (Fridenson 1994, Midler 1986). The aim of this document is to make a contribution, through a case study, to research into the success of innovations in management.

The case to be studied is a method of cost evaluation, the GP method. It was developed by the French engineer, Georges Perrin, in the second half of the 1930s and became popular at the end of the Second World War. Cost calculation systems had existed for a long time (Garner, 1954), even if the appearance of industrial accounting systems looking to establish information systems and to determine the product production costs may be traced back, in France, Great Britain or the United States, to the beginning of the nineteenth century (Lemarchand and Nikitin, 2000; Boyns *et al.*, 1997). In France, the homogenous sections method proposed by Lieutenant-Colonel Rimaillho in 1928 should be particularly mentioned. This method is considered to be the origin of all techniques used, the latest developments of which are to be found in the 1982 Chart of Accounts (Lebas and Mévellec, 1999). In a French context, it had a social and political finality close to corporatism (Bouquin, 1995a; 1995b).

The appearance of a new method is a rare event. Even if since the 1960s criticism appeared in France and the USA (Bouquin, 1997), 1987 is a point of rupture with the appearance of ABC (*Activity Based Costing*) discussed for the first time by Johnson and Kaplan. The contribution of this approach has been the subject of lively debate: was it important to underline the deviations of the application of the homogeneous sections method (Bouquin, 1993; 1997) or to develop an innovative approach to economic calculation (Mévellec, 1991)? Further analysis shows that at the end of the Second World War, alternative methods of production cost calculation, **entre autres celles fondées sur des rapports constants ou des coefficients d'équivalence**, were developed to reply to criticism made of the homogenous sections method (Lauzel, 1973). It was considered to be too superficial in the analysis of operations, regrouping into homogeneous sections, the determination of application bases and their attachment to products². The GP method was the most successful of them. After having set out the emergence of the GP method and its diffusion, we will study the causes of its failure.

1. THE EMERGENCE AND DIFFUSION OF AN INNOVATIVE METHOD

Georges Perrin played a central role not only in the emergence of the GP method but also to its promotion. Following his early death, his wife Suzanne and different consultancy firms were to promote the method.

¹There are several accounting history magazines: *Accounting Business Financial History*, *Accounting History*, *The Accounting Historian Journal*, *Entreprise et Histoire*. Other magazines devote space to this reflection: *Accounting Organizations and Society*, *Accounting Horizons*, *Comptabilité Contrôle Audit*, *Management Accounting Research*.

²Un reproche contradictoire est également adressé : la méthode des sections homogènes ne permettrait pas une vision globale des opérations au travers de synthèses instructives.

1.1. GEORGES PERRIN AND THE DEVELOPMENT OF THE GP METHOD

Georges Perrin was born on 6th November 1891 in Chalon-sur-Saône. He was an engineer at the Ecole Centrale (year 1919/2) just like his industrialist father. And the end of the First World War, after working for a short period for *Rache et Bouillon* in Paris, he went to Brazil from 1920 to 1925. He worked as an engineer for *Lage Frères* in Rio de Janeiro, a company owned by the family of his brother-in-law with a wide range of activities (navigation, iron and coal mines). On returning to France, he was appointed director of the Chalon company *Schlumberger Filature de Drusenheim* then *Streissgutte* in Strasbourg, a manufacturer of steel tubes and hospital equipment and a consulting engineer for the weaving company *Hartmann* à Rouffach. Mobilised in 1939 as an air force lieutenant, he returned to civilian life after the armistice. He withdrew to his Normandy château in Chéronvilliers where he developed, among others, the GP method. This method was a result of his professional experience during which he was regularly confronted with the problem of distributing indirect costs in the production costs of articles manufactured.

Georges Perrin based in his thoughts on the fact that it is difficult to measure production in a factory with a common unit. The breakdown used by manufacturing obtained by dividing these costs by the number of units produced is unsuitable. It is impossible to correctly attribute the necessary costs to each series of products manufactured, as there is no common unit of measurement.

Rather than looking for the best breakdown possible and consider that company's total costs are the only ones that can be used without ambiguity, it is possible to move the problem by looking for unification of production. This unification can be realised in determining the "production effort". This notion represents all direct and indirect production processes necessary for manufacturing. The notion is homogenous as whatever the products manufactured and whatever the method of manufacture; the unit chosen to measure the production process is the GP. The choice is arbitrary; it may correspondent either to a specific machine or a predetermined part to be named the "base article".

The GP method is based on disguised constants that can be resumed thus:

"Whatever the unit price, production effort is used by various elementary theoretical work operations in a factory are between themselves in constant relationships over time".

A theoretical elementary work operation is an operation defined in the finest detail. To measure the production effort of such an operation, all costs implicated by that operation at a given moment should be taken into account. Relationships remain constant if the prices of all products increase significantly at the same time. This is also true even if one or several cost items increase greatly compared to others but if they have identical shares in the different operations. It is only when one or several cost items without identical shares sharply increase that the relationship ceases to be constant. The principle of hidden constants is almost always therefore confirmed². In practice, the observations of the designer of the method and industrialists that use it, have in their majority, shown that they need not be revised for a few years (5 or 6 years). Changes in mechanisation and capital and work add to these ad hoc elements.

The degree of accuracy of a production cost increases with each expense or cost item taken into consideration, company costs may be distributed as attributable and non-attributable costs. A rule for distributing attributable costs between work or objects manufactured may be determined. Non-attributable costs are characterised by the fact that it is quite impossible to determine distribution rules for objects or operations. Any expense item wrongly left in non-attributable costs is a source of inaccuracy. Non-attributable costs should only include those

expenses and costs that are definitely non-attributable. Non-attributable costs should not be confused with overheads. If the study is properly carried out, overheads cover far fewer items. When it is not possible to logically distribute an expense item, it should be limited to non-attributable costs. The desire to reduce non-attributable costs was expressed by Rimailho in 1928, as well as those who previously made a distinction between "overheads" and "special costs". For example, Courcelle-Seneuil (1854, p.267) recommended specialising "overheads" as much as possible.

Each operation is allocated an hourly constant in GPs, the number of GPs necessary to manufacture each article may be calculated if the working times for each operation are known. The time necessary is not the time actually passed but that allocated. This enables production risks that are usually included in overheads to be eliminated, an unlucky part no longer supports the costs of a manufacturing incident that could have happened manufacturing another part. The logic used is that manufacturing incidents are inevitable, that they are company costs and all production should support their share. The number of GPs for each article is called the "equivalent" of the said article. All production in a factory can be evaluated in GPs for a given period. The GP production cost can then be calculated over a period by the number of GPs produced during that same period.

1.2. THE PROMOTION OF THE GP METHOD

At first, Georges Perrin played a central role in the promotion of his method using a partnership with a network of public accountants then a consultancy firm *La Méthode GP*. After his early death in 1958, his wife Suzanne took over the consultancy. From the end of the 1960s, following a drop in activity, signing an agreement with established consultants remained at the only solution to continue promoting the method. Setting out these three phases will allow us to identify the causes of the failure of the method, even if it remains popular on a small scale in France and in Brazil

1.2.1. Georges Perrin and the promotion of his method

According to Georges Perrin, the method was conceived in 1938 but technically operational in 1945³. At the end of the war, Georges Perrin had neither the financial means nor the time to commercially develop his method alone. Until then it had only been used in a small boilermaking company. He needed a known reference. In July 1945, he met Yves de La Villeguérin who managed a network of accounting firms *Fiducia (société fiduciaire de contrôle et de révision)* based in Paris who had a number of agreements with other firms in the north of France, Metz, Lyon and Bordeaux making up a group of about 200 employees⁴. He convinced Yves de La Villeguérin of the advantages of his method.

Fiducia only had accounting and auditing activities and was looking for, at a time when only homogenous detection methods were used and seemed too complex for a large number of companies, a complimentary activity using a simple cost calculation method⁵. *Fiducia* customers were not enthusiastic about the GP method. Advertising became necessary and Georges Perrin had to start prospecting, just what wanted to avoid. There was, indeed, much work to do as according to him⁶ "advertising campaigns attracted a large number of curious people and requests that would not be followed up, "GP" sent several thousand explanatory letters following all these requests and received just three orders. Some business was carried

³Note *Bases doctrinales de la méthode GP et conséquences pratiques*, 1951.

⁴*Ernst and Young* took over *Fiducia*'s Parisian activities at the beginning of the 1990s.

⁵Interview with Jean de La Villeguérin, son of Yves de La Villeguérin.

⁶From letters exchanged between Georges Perrin and Yves de La Villeguérin.

out between 1946 and 1950. *Fiducia* clients were not interested despite insertions in the monthly bulletin and weekly information sheet as well as promotion to *Fiducia* staff and local offices.

Georges Perrin criticised *Fiducia's* desire to promote the method who then criticised the technical difficulties that he met, levels of staff training and his unavailability that prevented them from visiting a sufficient number of prospects. A dispute followed during 1950 over the distribution of income and expenditure. This led to negotiations through lawyers finalised on 26th November 1951 by the creation of a limited company whose associates were: Georges Perrin with 40%, Jean Blondeau with 25%, Yves de La Villeguérin with 2% and *Fiducia* with 33%. Its aim was to:

"Promote in France, the French Union and in foreign countries the method called GP to establish industrial production costs and to control company management by GP and for applications the results of it".

Two business school engineers had been recruited: M. Berry in 1950 and M. Huet in 1951. Business was low at the beginning and difficult and unstable later. The minutes of the management committee of 29th December 1952 specify that: "We should make propositions without detailed work with a moderate price to encourage interest from the client", those of the management committee of 2nd February 1952: "Business is still low despite our greatest efforts [...] propositions at 150,000 francs have no greater take-up than those at the normal price. It seems that the lack of business does not stem essentially from a question of price". Also, during the management committee meeting on 29th June 1953, Georges Perrin said that in his opinion the expansion of the company depended on notoriety more than anything else and proposed writing articles that were not directly advertising in magazines such as *l'Usine Nouvelle* or *Industries Textiles*. A series of articles (Perrin, 1953a; 1953b; 1953c; 1953d; 1954a; 1954b; 1955a; 1955b; 1955c) and conferences followed up to his death. His first known presentation was on 16th November 1953 in front of the society of civil engineers⁷, of whom he became a member in 1947, with the title *The Principle of Unifying Production Measurement in the Management of Multiple Manufacturing Industries*. Another important presentation was made to *CEGOS* by M. Huet 13th May 1958 (*CEGOS*, 1958).

Georges Perrin also sought to promote his methods with employer's organisations emphasising that beyond production costs, a unified method would allow comparison between members, a common language. He therefore worked on another theme: "A profit-sharing scheme that gives everybody a real share in their work" for which he received several requests from employer's organisations. GP documents show contacts and conferences with employer's organisations in the 1950s, sometimes followed by the experimental implementation of the GP method in a factory. Unfortunately, none of these experiments were to lead to a generalisation to all members of an organisation. Articles seems to have had a better impact: during the management committee meeting of 21st December 1953, it is mentioned that "these orders after the most part in the results of articles by M.Perrin". On 28th June 1955, M. Blondeau sold some of his shares to (60 of 125) to M. Lengaigne. In 1956, Yves de La Villeguérin died and was replaced by his son, Jean.

The company's sales grew and it made regular profits. Unfortunately Georges Perrin fell ill in 1956. He resigned on 1st June 1957 to be replaced by his wife, Suzanne. In 1957, the

⁷The society of civil engineers was created by "Centrale" business school students in 1839. It was long dominated by them, but open to all civil engineers. Other than defending the title of engineer, one of its objectives was to be a learned society. Its statutes stipulate that it aims are [...] to contribute to the development of applied science to major works in industry [...] pursue by study questions of industrial economy, administration and public utility, the most extensive application of the country's strengths and riches"

company made large losses due to a fall in sales and Georges Perrin's inactivity. He died on 5th February 1958.

1.2.2. Suzanne Perrin

Suzanne Perrin very courageously attempted to continue to work of her husband. From 1958 to 1963, the company either made small profits (1959, 1960, 1962) or losses (1961, 1963) with turnover and constant cash flow problems. Suzanne Perrin continued her husband's publication activities under her own name (S. Perrin, 1959, 1961, 1964, 1965a,b,c, 1966a,b, 1967a, b, 1973) or the pseudonym, Xavier Serrières (Serrières, 1969). In 1962, she published our husband's posthumous work *Prix de revient et contrôle de gestion par la méthode GP* (1962) with Dunod.. A conference was organised by the *National Association of Accountants - France* (of which Lauzel was the vice president) with the support of the French National Accounting Council. The method was presented by the representative of the Société des Filatures de la Gosse, an old and faithful client of the GP method, Mme Perrin was also present with her son.

At the same time, it was difficult to find new clients. From now on, the company relied more on repeat orders than new clients. During an extraordinary general meeting, on 9th January 1964, Suzanne Perrin explained the company's difficulties by the age of its employees (M. Berry was by then 78), the over specialisation of the company that provided no complimentary or related services, the absence of a sales department⁸ and the insufficiency of share capital depriving the company of cash flow that would enable it to launch large scale projects. She concluded with the request to increase the capital to improve cash flow and "invest" in hiring and training young engineers. However, business was slow in 1964 and 1965. 1964 ended with heavy losses and a share capital reduced to nothing. The successive departures of M. Berry and M. Huet, whose errors lead to extensive verification work, the hesitations of the associates over increasing the capital meant that the 1965, 1966 and 1967 financial years lead again too extensive losses, despite hiring new engineers.

1.2.3. Consultancy firms

As Suzanne Perrin had health problems, all associates empowered the *Institut d'Etudes et de Mesure de Productivité (IEMP)*, a non-profit making organisation, in exchange for royalties to promote the GP method from the 1st September 1969. The *IEMP* was composed solely of engineers and devoted its activity to economic measurements and productivity. The *IEMP* was to be responsible for studies necessary to incorporate the GP system into computer management programs that it was developing.

The *La Méthode GP* company ceased all activities from this date and its staff were made redundant on 1st August. A dispute appeared rapidly with the *IEMP*, who, according to Suzanne Perrin, did not assuming its obligations to use and develop the method. Therefore, on 1st July 1971, *La Méthode GP* terminated the agreement and signed a new one with *Maynard France* from 1st September 1971, for three years. *Maynard France* also lost interest quickly in the GP method as it itself was being reorganised. At the same time, the director of the *IEMP* started another company *IMPsa (Informatique, Management, Marketing et Productivité)* and took a majority shareholding in PROSCOP. It claimed that these companies were the successor of the GP method. Indeed, in the agreement between *La méthode GP* and the *IEMP*, nothing had been planned in case of disagreement. However, as the *IEMP* was a non-profit making organisation, it was prohibited any commercial activity. The result was a large number of unhappy users (for updates) and new GP method clients as they no longer knew who to

⁸This job was done by Monsieur Huet who Madame Perrin thought to be incompetent.

contact and consultants were not sufficiently trained. This led to errors with an effect on determining sales prices as for the *Société des Textiles Roannais*.

Suzanne Perrin was no longer in agreement with *Maynard France* and she signed a contract with *Les Ingénieurs Associés (LIA)*, on 1st August 1975, an exclusive agreement to develop the GP method. *Les Ingénieurs Associés* were to participate in the promotion of the GP method and not make any changes to the system without the prior agreement of Suzanne Perrin. Suzanne Perrin, who was already old at the time, was reticent about changes to the method developed by her deceased husband. So after two years of cooperation, Suzanne Perrin decided not to renew the agreement. Nevertheless, under the terms of the agreement, *LIA* could continue to promote a similar method as long as the name was changed. Suzanne Perrin, through *La Méthode GP* proposed once again to develop the method.

On 20th October 1977, a new contract, non-exclusive this time, was signed with *Ouromoff et associés SARL* with offices in Paris and Lyon for a duration of 2 years renewable. *Ouromoff et associés* undertook, in case of termination of the contract, not only not to use the GP method but also not to use a method founded on the same principles. The latest studies that we found concern, in 1979, the revision of the GP indicators in the POSSO in their Fourmies and Genlis factories in France, Vallorbe in Switzerland and the implementation of the GP method in Kerville, Texas (USA).

1.2.4. Recent changes to the GP method: the role of the *Ingénieurs Associés*

Since 1975, *Les Ingénieurs Associés* have used the GP method but, in compliance with the agreements signed with Suzanne Perrin, it has been called the PU (Production Unit) method since 1977. However, most of *Ingénieurs Associés* activities have involved improving productivity in French groups. Until the end of the 1980's, these groups were relatively satisfied with their cost accounting system. 1987 was a turning point with the publication of the book by Johnson et Kaplan that led to a certain number of publications for American users and translated into French (Cooper et Kaplan, 1989; 1991). The debate surrounding the contribution of the ABC was generated by several works (Lorino, 1991; Mévellec, 1991) or articles in the *Revue Française de Gestion* and the Accounting and Financial Control section of the *Revue Française de Comptabilité*.

At the same time, the economic recession of the beginning of the 1990's led to a fall in sales for *LIA* and restructuring in 1992. To relaunch its consultancy activities, Jean Fiévez participated in several think tanks devoted to accounting and financial control (AFGI, CEREDÉ, ECOSIP) and proposed that Robert Zaya develop the PU method. The field of application of the PU method was progressively extended. Several applications had led Jean Fiévez and Robert Zaya to no longer concentrate simply on production costs. Particularly, in 1987-1988, one of the group's subsidiaries carried out an assignment in a subsidiary of a Swiss company, *Koenig*, who had a transport division. Another assignment was carried out at *Dassault-Falcon-Service* who managed spare parts. The PU method has therefore developed from simply analysing production costs and analysing almost all costs within a company⁹. So in April 1995, in a break with the former reference to the single notion of production, the name of the method was changed to the AVU (Added Value Unit).

A succession of articles followed presenting the PU and AVU methods with the aim of promoting their activities (Fiévez and Zaya, 1993; 1995a, b; 1999a, b; Fiévez, 1993; Fiévez and Cabanas 1999; Fiévez and Ouzen 1990) and a book was published in collaboration with Jean-Pierre Kieffer (Fiévez *et alii*, 1999). Five partnerships were signed with consultants

⁹As with the ABC method, most of the time there are costs that cannot be allocated. They cover, according to the experience of Jean Fiévez in the field, less than 5% of the company's added value.

(Clermont-Ferrand, Paris Region, Champagne-Ardenne, Tours, Nantes). One association was created on 28th March 1998 to improve and promote the AVU method creating theoretical teaching, practical application and expert qualifications. A user's club operates, for the exchange of ideas between companies that have adopted the method. Presentations of the method are made in business schools (E.S.C.P., E.S.C. Lille...) and in universities like Paris-Dauphine. Draft agreements have also been signed with consultants working in Portugal and Poland.

1.3. THE SUCCESS OF THE GP METHOD

The major advantage of the GP method is its fine analysis of the production process the effect of which is to better distribute production costs. At the same time, the abstraction of monetary units gives a better comparison of activities over time and space with the neutralisation of monetary variations.

Perrin explains himself in his note *Etude critique de la méthode GP* three imperfections of his method:

- the hiatus between practical working operations and elementary theoretical ones. This is the well-known problem of homogeneity. If several elementary theoretical operations are considered as one single practical operation, this is not homogenous and the production cost is not completely valid as it is an average of the production costs of the various theoretical operations considered.
- the sharp increase of a cost item compared to others
- the importance of non-attributable costs. The existence of non-attributable costs is an imperfection, as theoretically each article manufactured should include real shares absorbed of all costs. non-attributable costs may represent 10 to 20% of production costs in certain factories and up to 50% in others. the slightest improvement has a considerable effect therefore on production costs.

Beyond these weaknesses, the method has an initial limit of only concerning production activities by using just production costs to evaluate a company's expenditure. Another criticism is the initial ground work that imposes analysis of the company's activities necessary to implement the method. Finally, control of expenditure does not enable the causes of excesses to be isolated (volume, cost, variety).

Despite an advantages/disadvantages analysis that may be considered favourable, the GP method had quite limited success. The meetings of *La Méthode GP* associates meetings, letters exchanged between Georges Perrin and Yves de La Villeguérin, the *La Méthode GP* management meetings as well as letters exchanged between *La Méthode GP* and its successors shows that between 150 and 200 GP applications were set up during Perrin's lifetime, 80 by *La Méthode GP* after his death and 10 by the successors. Other applications were set up in Belgium, Brazil, Italy, Morocco, West Germany, Switzerland and the United States.

The GP method has almost been forgotten, even if it is still mentioned in the different editions of the book by Lauzel (1971, 1973, 1977, 1985, 1988) and in some manuals (Baranger and Mouton, 1997; Burlaud and Simon, 1997). Two cases of the CPA, one in 1958 and the other in 1960 have mentioned it¹⁰. The GP method, initially promoted by the members of the Lage family (Lage and Allora, 1961), has survived in Brazil (Rodrigues and Brady, 1991). It is true that the inflationist context of this country was a favourable factor. In France, a return to

¹⁰ Il faut noter que pour le rédacteur d'un de ces deux cas la méthode GP serait confuse.

basics was necessary, following questioning traditional methods of cost accounting (Bouquin, 1993) and the activities of *Les Ingénieurs Associés*, for the method to be rediscovered.

What are the reasons for this failure?

2. A FAILURE EXPLAINED BY AN UNFAVOURABLE ENVIRONMENT OR A TERRITORY ALREADY OCCUPIED BY THE HOMOGENOUS SECTIONS METHOD?

Tools like management accounting are institutionalised practices. They are not just the result of economic rationality, but also of the intervention of industrialists, the State and employers organisations ... (Lemarchand and Le Roy, 1998). According to Fridenson (1994), the main vectors of managerial innovation are:

- teacher networks For example, leading university teachers became the messengers of Taylorism in Europe in the first years of the twentieth century.
- professional reviews, more so when they are the organs of learned societies or engineer's associations as they maintain links with university teachers, engineers and industrialists.
- the State who, in France, helped promote Taylorism and at the end of the 1960s send young university teachers to the USA to train in management.
- travel However, "over-rushed fixers, too constrained by specific objectives, collecting data too selectively and in too small units on management models used abroad and as such contributing to making their transfer a fashion".

From an historical point of view, it would seem that managerial innovation obtains durable results more from institutional practices than individual initiatives.

Observing the conditions in which the GP method emerged and was promoted, its institutional environment, the managerial ideas used at the time, Perrin's network of relations and the methods chosen to promote it by its inventor, shed some light on the weakness of its audience.

2.1. A DIFFICULT INSTITUTIONAL CONTEXT

Zimnovitch (1997) distinguishes two periods of change for methods of calculation:

- a "heteronomous" production cost whose bases of calculation reside outside the interest of the company. It is itself divided into two periods. From 1880 to 1930, it was developed by the defenders of industrial accounting "that aimed to affirm their corpus as much as to defend the position of those that possess it". From 1930 until the end of the war, continuing up until the 1950s, it bears the technocratic, ideological and corporatist mark of accountants looking to cover the entire company. A third way resulting from the sociological and political crises of the 1930s and looking to resolve conflicts by determining a just price and just remuneration for all.
- the "management" production price that was inspired, after 1950s, by the standard production price obtained from productivity missions and "direct costing" born out of economic boom.

Rimailho and his homogenous sections method may be, without contest, classified as an author of the second period of the heteronomous production price (Bouquin, 1995a; 1995b; Lemarchand, 1997; 1998; Lemarchand and Le Roy, 1998; Zimnovitch 1997). Coherent with its

environment, the homogenous sections method was extremely successful. However, what of the GP method? We can see two periods: Georges Perrin's environment when designing his method and that of the consulting period where he devoted his efforts mainly to promoting it.

2.1.1. The inter-war period: looking for a reference method

In France in the 1920s economists started searching for a single way of calculating production costs. This research was sponsored by CNOF¹¹, COS¹² and CGOST. In 1927, the CGOST technical problem sub commission whose preoccupation was to reduce production costs but in order to do this needed to know them, set up a committee to reflect on a process for calculating costs that could be applied to all industries under the leadership of Lieutenant Colonel Rimailho (1864-1954). More light can be thrown on this aim by Auguste Detoef, a member of the technical subcommittee: "Reducing production costs with better organisation is very good, but first we have to know this production cost". A year later, Rimailho published his first report followed by a second one in 1928 under the aegis of CEGOS.

Until 1936, employers organisations were divided on the needed to impose a single production cost method through fear of what of the tax authorities may make of it and the opposition between small businesses, subject to increased competition and in favour of the project and larger businesses who did not favour it as they operated in oligopolistic where arrangements already existed (Lemarchand and Le Roy, 1998; 2000). There were also hesitations in the middle of the 1930s on the utility of such a method. As the recession continued until the end of the 1930s, the State intervened in the development of arrangements making them sometimes obligatory from 1935 with sanctions and arbitrators. The arrival of the Popular Front in 1936 saw the beginnings of a managed economy. Price controls were instituted in 1936 with the creation of a national price control committee. Prices were blocked in 1937. The opposition of employers organisations then disappeared and CEGOS published a brochure in 1937 prefaced by Auguste Detoef: "A single production costs method: why? how? Employers organisation's aims in this period were well defined: determine a common method for calculating to fight against competition using a destructive cost policy, each competitor being able to determine costs in the same way. Calculating production costs became the main issue in a *real private accounting normalisation designed not to calculate exact costs but to regulate competition within the business sectors* (Bouquin, 1995a). Competition had to be regulated to avoid reciprocal ruin: "Someone who knows, for example, how to determine his provisions better than others will benefit from explaining the secret to his competitors if he does not want to fall victim to ignoramuses submitting to chance ridiculously low prices that would ruin both of them" (Rimailho, 1947) and even in Auguste Detoef's preface "to save what can be saved from economic liberalism" (CEGOS, 1937).

The different employer's organisation were dissolved with the Labour Charter in 1941 and organisation committees were set up. Organisation committees were set up. Their aim was to identify companies, stock and the labour force, elaborate production programmes and propose prices. This change was a manifestation of the corporatism and planning or technocracy that were at their height under the Vichy regime. The end of the war marked the end of their influence.

How did Georges Perrin react to this institutional environment? Looking through the archives has shown a document on the application of his method under the economic policy of

¹¹Comité National de l'Organisation Française (National French Organisation Committee) created in the middle of the 1920s.

¹²Service de l'Organisation Scientifique du Travail (Scientific Organisation of Work Service) under the leadership of the UIMM.

the Vichy regime and the organisation committees, "the GP analysis method serving the new economy" :

The new economy currently being organised needs specific documentation on the operation and profitability of companies.

It is important that figures be comparable and for this they all need to refer to a common measurement. This could be the GP Analysis Method. The organisation committees would receive from each factory half yearly or yearly a half yearly or yearly control, representing all their monthly controls.

All the tasks the responsibility of the Organisation Committees would be made easier by General Controls.

The Organisation Committees, basing their calculations on a sector GP General Production Price, would fix the GP Sales Price, valid for all products manufactured in the said profession. A company's profits would be therefore based only on its production effort.. This is a notion that is infinitely more accurate than an arbitrary increase of the purchase price of goods. This does not mean that purchasing and selling goods does not merit a salary, this simply means that the salary is paid for the activity corresponding to acts and not the goods themselves.

Traders do not in theory feel the need to use the GP method, even though it may profit them. Yet in terms of warehousing, if certain goods stand out from others as efforts to be made, equivalents should be used.

For fixing sales prices, normal GP production prices will soon appear almost exactly and the GP sales price may be fixed in full knowledge of the situation as explained higher. Prices for all goods in a sector would be determined by fixing this single figure.

The only point is that GPs should be sufficiently widely used so that in each industry they provide real stability, that is that they represent production efforts that are constant for whatever period.

We will limit ourselves to this question as many consequences may be envisaged, particularly taking the GPG as unit exchange between two goods without the help of currency. This however is outside the remit of this note.

Georges Perrin's archives also show that he kept up to date with conferences organised by CEGOS on production costs during 1941 and 1942. He possessed, if he did not participate in them, the minutes of CEGOS activities and particularly one showing a presentation by M. P. Daum, President of the *Union Syndicale des Verreries* in 1942 on the results of experiments carried out by an employers organisation on the same articles made by the members of that organisation. Through close cooperation, the members of the organisation managed to determine the exact production cost enabling them to establish a sales price that satisfied all members.

This institutional environment reinforced the CEGOS's propositions. Indeed, for the same sales price, the single method of calculation was needed and therefore a single accounting method that CEGOS promoted developing propaganda for the homogenous sections method by cycles perfecting production cost calculation methods organised in 1941 and 1942. It is in this institutional environment that the homogenous sections method successfully became the single reference. It is in this same environment that Perrin worked until the age of 54, period during which he conceived his project.

2.1.2. The post-war period: a static vision in a quickly changing environment

As a consultant, Georges Perrin, worked in a completely different environment. The technocratic and planning ideas of the Vichy period had aspects of modernity. They were defended by the administrative elites that sometimes found themselves in the 4th Republic. However, if elements of the planned economy survived certainly until 1949-1950 (when the authoritarian distribution of industrial products and rationing were abolished) and later through planning and the important role of the state, they were finally abolished under economic liberalisation measures. It was no longer the period to persuade employer's organisations to adopt a new standard production price calculation method.

Boosted by the Marshall Plan, France was rebuilding itself and was preparing to enter the Common Market during an unprecedented period of economic growth and within a framework of economic liberalism in place since 1947. After some difficult years, production levels in France rose after 1950 to those of 1938. From 1949 to 1969, gross domestic production grew by an average of 5%, an exceptional level for France less because of the amount of growth than by its duration (Carré *et al.* 1972) despite an inflationary trend contained by stabilisation plans in 1952, 1963 and 1969. This growth was accompanied by a progressive removal of price controls. It was not before 1958 however that an effective competition policy was introduced. 1958 was a turning point as it marked the beginning of the 5th Republic and the election of de Gaulle as its first president, but also the return of currency convertibility and freedom of exchange rates. Budding European construction would also spell the end for counters, cartels and other arrangements. In 1951, the Treaty of Paris that instituted the European Coal and Steel Community included provisions regulating arrangements and concentrations. The Treaty of Rome signed in March 1957 and applicable from 1958 also had some in its articles 83 to 85. It also implies the progressive dropping of customs barriers to stimulate competition. It was only from 1978 that the systematic liberalisation of prices became effective (de Lattre and Deguem, 1980). René Monory, Minister of the Economy and Finances liberalised prices with the aim of stimulating competition.

In this environment, Georges Perrin changed little and his thought became increasingly anachronistic. He remained faithful to his ideas on the application of his method under the Vichy regime's organisation committees. His archives show that he made a large number of contacts with professional organisations to implement his ideas. Contacts were made with the union of manufacturers of lifting and handling equipment (1955), the union of manufacturers of electric threads and cables (1955), the union of telephone and telegraph industrialists (1955), the union of manufacturers of lifting and handling equipment and the union of manufacturers of heavy electrical equipment (1955), the union of manufacturers of electric equipment (1955) the union of manufacturers of electric machines (1955), the cotton union of the west (1955), the cotton union of the east (1955), the metallurgy union (1955) and the French union of manufacturers of textile equipment (1956).

This correspondence followed a presentation by Perrin 1953 to the society of civil engineers and his articles. They were either initiated by the unions concerned or by Perrin himself. Contacts were sometimes followed by conferences or even visits to factories that had adopted the GP method. Nothing was to come of these contracts however and certain unions even seemed, according to a letter sent by Perrin, to denigrate the GP method among their members.

These ideas were to be maintained in a posthumous book published in 1962! An entire chapter is devoted in this book (chapter 35) to *Employer's union possibilities, industrial arrangements and banking control*. Statistical help. It can be read:

[...] *the unification of production managers give employer's unions, beyond the simple limits of a company, the opportunity of a common language...without the*

industrialists concerned having to reveal their manufacturing processes or their working methods

The need to speak the same language in terms of production is also felt in different forms of industrial arrangements for which companies seem to show increasing interest. French legislation has become quite liberal on this point and we now find an infinite variety of arrangements either fixing sales prices or setting contingents for imports or exports, distributing contracts or regulating a quality produced. Signposting arrangements, distribution arrangements, purchasing arrangements and common representation are only the results of the same state of mind that recognises the necessity of abandoning little by little independence of the liberal economy for a freely consented and codified discipline with mutual agreements, different manifestations of the same need to unite efforts to obtain better profit.

Another attempt at the technocratic application of his ideas, but no longer in relation to his institutional environment, appears in the note Economic Science and techniques in the same chapter 35 of his book. It consists in including the GP method in the budding French system of planning. The advantage for statistics and production measurement is that the GP would be a better unit of measure than the franc as it did not take into account variations of price between the different sectors Georges Perrin referred even to the attempt by the Soviet finance commissar to establish a work unit, the “troud” and to Rimailho with his “work units”.

Another obstacle to the popularisation of the GP method was competition from other methods, in particular the homogenous section method, but also from North American approaches.

2.2. THE UNEQUAL STRUGGLE WITH OTHER COSTING METHODS

We should take into account the extraordinary modernity of Perrin and his method. This fact has also been remarked by Bouquin (1997) and Zimnovitch (1997). He was one of the first in France to show the weaknesses of complete cost calculation methods, principally the homogenous sections method that was at that time a reference in terms of cost calculation. His criticisms in the 1950s are very close to those considered as innovative by the defenders of the ABC method in the 1980s.

Indeed, in the time needed to manufacture an object, labour was the most important share of costs, the rigour with which we counted working times was the only element that conditioned the exactitude of the production cost. A small share was to be added for overheads that mainly included some management travel costs that could be charged to various products by a percentage by adding the work carried out to each object manufactured, that is the labour paid [...] enormous errors that resulted from charging the same percentage of overheads [...] the percentage method is completely outdated by new working conditions that are the result of the progress of the use of machinery¹³.

The application of a uniform percentage could be admitted up to a certain point; as long as competition did not require more specific knowledge and above all that the said percentage did not exceed certain limits. But when the use of machinery leads to an increase in overheads and takes them up to proportions of 500, 800 or 1000% as is the case now, we can no longer consider as valid production costs

¹³Note Evolution of the question of production costs

*established using a productive labour cost base that has become too narrow and adding a percentage of overheads using expensive machines*¹⁴.

According to Georges Perrin, the GP method represented real progress compared to known fashionable methods at the time in Europe and the United States¹⁵. However, the GP method coincided not only with the period that the homogenous sections method became popular but also by the arrival from the United States of management methods the result of productivity missions. *Les méthodes nord-américaines, tout comme la méthode GP, apportaient des réponses aux faiblesses de la méthode des sections homogènes. De surcroît, les méthodes américaines présentaient de réelles innovations pour le management (direct costing et coûts standards) tout en bénéficiant de l'aura de méthodes originaires d'un pays à la pointe des pratiques en matière de management. Par contre, la méthode GP n'était qu'une nouvelle méthode française d'évaluation des coûts complets.*

2.2.1. The homogeneous sections method

Georges Perrin's writing and conferences as well as his sales arguments took up a position relative to the homogenous sections method. He opposed it criticising its clumsiness and the lack of homogeneity in the sections. He knew the work of Rimailho. He referred in his notes¹⁶, to Rimailho's presentation in 1925, that is a presentation to the society of civil engineers and his report to CEGOS in 1928. In his note *Quelques différences entre la méthode GP et le calcul des prix de revient par les moyens comptables par sections*, Perrin saw four advantages for the GP method compared to the homogenous sections method: clarity, simplicity, rapidity, exactitude.

- simplicity, the breakdown of all costs between the sections “is a big job and if the dissection of the factory reaches or exceeds 40 or 50 sections in an attempt to reach the impossible homogeneity of the sections, this task becomes considerable”.
- rapidity, “the results of the breakdowns are inevitably obtained late, by several weeks or even several weeks.
- clarity as “they are also difficult to interpret” Each cost is split into as many fractions as sections according to laws or percentages whose, as good as they may have been at the origin, validity is impossible to determine.
- and exactitude, because of the lack of precision in accounting breakdowns in the sections methods.

He also criticised the homogenous sections method in his note *Note sur la méthode des sections homogènes et méthodes dérivées* for:

- its complication due the high number of sections, sometimes more than 100 breakdowns, implying considerable personal work and delays to obtain the results
- its lack of precision due to lack of homogeneity between sections.

Also, in his *Evolution de la question des prix de revient* he says [...] when the homogenous sections method appeared, industrialists were put off by complications proposed to them [...] at the same time, up to a certain point, complication became fashionable. The more calculating production prices required personnel and paper, the more the impression was given of perfection. Another criticism made involves the complexity of method. In another untitled note he declared: it is pointless getting weighed down by extreme complications that

¹⁴Perrin, 1962.

¹⁵Note: *Quelques différences entre la méthode GP et le calcul des prix de revient par les moyens comptables de gestion.*

¹⁶Among others the note: *Quelques différences entre la méthode GP et le calcul des prix de revient par les moyens comptables de gestion.*

lead to measures used in recent years. These methods are always derived from the CEGOS method called “homogenous workshop and distinct accounting systems”.

2.2.2. North American methods

Perrin also had to make an impact in face of competition from methods from across the Atlantic brought back by members of productivity missions. After the end of the war, France was lagging behind seriously in the field of productivity. Indeed, according to Jean Fourastié “in 1948, a Frenchman carried out a job in five hours that an American carried out in one, ratio was 3 to 1 in 1938” (Fourastié, 1949). So the French Planning Office created a working group in 1948 on productivity presided by Fourastié, the champion of productivity in France. Then, on 27th June 1950 the National Productivity Committee was created replacing the Provisionary Productivity Committee, itself created in 1949, the French association for the increase of productivity (AFAP) was added in 1950 as was the General Productivity Office in 1953. All this was carried out with the help of the Marshall plan who provided American funds to help the AFAP organise productivity missions in the USA. The aim of these productivity missions was to discover sources of productivity in the USA. From 1949 to 1953, 4,500 participants (business leaders, engineers, managers, union leaders, top civil servants) discovered and brought back American organisation and management ideas even if they had mixed feelings on returning being impressed by American efficiency but worried about the cultural price to be paid (Kuissel, 1984; 1996; Fridenson, 1994).

A new social professional category appeared: executives (Boltanski, 1981; 1982). The discovery of America dominated French intellectual and social life from 1945 (Boltanski, 1982). The identity of the executive became clearer and distinguished itself from that of the engineer (Boltanski, 1982). The appearance of executives as a separate group is important as they were the agents of the introduction and spread of the American model, their conversion to the new ideology being one of the aims of the productivity missions. Magazines for executives appeared: Jean-Jacques Servan-Schreiber’s *l’Express* in 1953, then at the end of the 1950s *L’Entreprise*, *Direction*, *L’Economie...* and E. Schreiber’s *l’Expansion* in 1967.

These executives discovered that France’s backwardness in terms of production was not only due to technology or work organisation but above all to the nature of human relations within French companies. Criticisms by American experts concentrated mainly on the lack of respect and communication with workers and the absence of university training in management for managers and business leaders. Modernisation was not only to be technical and also managerial (Kuissel, 1996). The American authorities made the training of competent and politically safe managers a condition of acquiring Marshall plan finance.

A new industrial ideology was to appear (Guigueno, 1995). The management industry was to appear in France around American-style management, mainly human engineering. Successively, the CNPF (French employers organisation) created the CRC in 1953, then the Paris Chamber of Commerce created the CPA in 1954. At the same time, management was introduced to universities with the creation of IAEs in 1955, and the numbers of management schools increased from 1956–1958. Young professors were sent to American universities for a year. At the same time, there was a sharp increase in the numbers of consultancies in organisation made up of a new generation of graduates mainly from the *Ecole Centrale*. CEGOS, managed for 20 or so years from the 1950s by O. Gélienier, developed a wide range of American management tools. Under his presidency, staff levels increased from 40 to 6,000 across the world in the middle of the 1960s. University teachers, financiers and business leaders featured on its board of directors. Many other members of the different firms had belonged to the BICRA (organisational consultants bureau created by J. Coutrot at the beginning of the 1930s). These firms’ field of action also expanded, being no longer simply

limited to rationalising production but covering the selection of staff as well as commercial and administrative matters.

The fascination with America was shown in France by the expansion of new management accounting techniques: financial control, budgetary management, standard costs, direct costing... According to Zimnovitch (1997), from 1910 to 1950 in France, the standard costs method was ignored or even combated in literature. It was not until the 1950s and 1960s and results of productivity missions, among others have the report of the public accountant's mission¹⁷, that this method started to develop. This mission reported that in the USA the historical costs method and its accuracy was little used. The speed of standard costs was preferred. In France however, accuracy was sought after:

Our theorists and technicians have patiently built, particularly in the last 20 years, a system that is remarkable in its logic and included in the 1947 Chart of Accounts. It has become the basis of official teaching without however it seems have been very frequently or very methodically put into practice. In other terms, the French school has above all endeavoured to perfect "historical" production prices, costs and expenditure of all types are distributed as completely and fairly as possible between so-called homogenous work progress sections and between different products [...]. This very detailed solution is not without serious disadvantages. Firstly, it does not allow for any a posteriori checking, after a relatively extended periods due to the length of the calculations. Secondly, it tends to dilute responsibilities and make research more laborious given that a section leader has to take on expenditure made by other sections over which he has no control [...]. If the French strive to calculate exact production costs, the Americans attach importance above all to firstly defining responsibilities and measuring variations in costs and yields compared to provisions and standards and secondly to inform as quickly as possible managers, department heads and foremen of any anomalies observed... pragmatic Americans also attach little importance to formal procedures for obtaining required results indifferently using recording and measurement techniques of the most varied accounting or non accounting methods.

From 1950, CEGOS was converted to standards and organising training on this theme. Books concerning the calculation of production prices whose first edition preceeded 1951 all discussed standard price (Zimnovitch, 1997). After 1954, this theme appeared in CPA cases. The impact of productivity missions was to increase awareness or even the adoption of budgetary control in France (Berland, 1999). *Direct costing* was popularised later, at the end of the 1950s.

Georges Perrin generally criticised American production cost determination methods. In his note *Nos prix de revient et la conception de ce problème en Amérique* he wrote:

The wind that has brought from America all these study missions blows, in terms of production costs, in the direction of rapid information collection [...] we see therefore American industry searching for everything that is simple and quick in terms of production prices [...] such simplification is not the future for French industry because of:

- (1) higher levels of manufacturing specialisation in American factories*
- (2) greater currency stability and general economic conditions in America.*

¹⁷Accounting, a measure and factor of productivity. Report of the French public accountants mission to United States. Supported by the *Ordre National des Experts-Comptables et Comptables Agréés*, the French association for the increase in productivity and the E.C.A (Economic Co-operation Administration).

More specifically, he opposed the standards method. According to Perrin¹⁸:

“What is impossible in an American factory is not necessarily so in a French one of the same type. Therefore, factories in France that could be satisfied with the standard production cost system are rare.....”, “ If standards were isolated from this notion of francs and they wanted to cross the path, they would have arrived at the GP method. There is no doubt, they were on the way”. “The great advantage of standards is that they are established once and for all or at least for a period of several years. This however supposes quite stable economic conditions... in a surplus when fluctuations are applied to different types of production”, “simplicity of the standards method... in practice is more apparent than real as the main problem is moved on to the periodic calculation of the adjustment coefficients”, “The establishment of standard expenditure for a period supposes counting the numbers of each article produced and multiplying it by its standard production price. Simple and quick work for 20, 50, 100 articles but almost impossible for thousands”.

He also criticised *direct costing* in his work for being more a provisional process than a production costs calculation procedure. If he criticised American methods, he cleverly managed to refer to America and its managers. In a letter to the president of the cotton union of the west dated 11th February 1955, Perrin makes a reference:

American experts from the Westinghouse company come regularly each year to control their Parisian subsidiary that makes brakes (Jourdain-Monneret) think that in their opinion the GP method is better than anything they have currently in America

Also promoting his own method, the Perrin method presents the rapidity of the presentation of results.

that is so much the basis of the value of information that the Americans, whose practical sense cannot be denied, have adopted the slogan rapidity over exactitude in terms of production prices...

Beyond badly adapted communication and strong pressure from competing methods, various elements also conspired to hold back the promotion of the GP method.

2.3. GEORGES PERRIN’S ERRORS AND WEAKNESSES

It may be observed that four other elements held back the promotion of the GP method: Perrin’s network of contacts, his own hesitations about the type of communication to adopt, the difficulty of convincing accountants to adopt an engineer’s method and too narrow positioning by his company.

2.3.1. A weak network of contacts

Parallels may be made with the success of a competing method in France: Rimailho and the homogenous sections. According to Lemarchand (1998), who discusses why and how Rimailho was made responsible for the work and its success, and if another technician had been nominated to carry it out, would the results have been different? His answer is: the meeting of Rimailho’s career and CEGOS is a key moment in the process.

Rimailho and the homogenous section’s success was due to:

¹⁸Notes: De la rapidité en matière de prix de revient, De la méthode américaine des prix de revient standards and Réponses à des objections lors de l’exposé à la CEGOS le 13-5-1958.

- the legitimacy that his Ecole Polytechnique training gave him: graduating in 1886, he chose a military and artillery career. He left the army as a Lieutenant Colonel in February 1893
- his notoriety as technician; he participated in the development of the 75 mm canon brake and the 155 mm rapid fire short canon in 1904 to which he gave his name and which achieved much at the beginning of the First World War.
- his proximity to major business leaders: he started his civilian career as director of the *Compagnie des Forges et Aciéries de la Marine et Homécourt* at the Saint-Chamond plant where he was known for his organisational talents (Moutet, 1997). he met major business leaders during meetings of equipment manufacturers during the First World War. subsequently, in 1919, he became the managing director of the *Compagnie Générale de Construction et d'Entretien du Matériel de Chemin de Fer* (CGCEM). He was also a member of the board of directors of the *Société des Etablissements Gaumont* from 1913 and was the second president of the *Compagnie des Machines Bull* (1932-1933);
- his influence with propagandists of scientific organisation: he started a series of public presentations around 1925. he was one of the Taylorist engineers who distributed *scientific management* after the 1920s (Moutet 1997). he held a number of conferences at the *Ecole Nationale Supérieure d'Aéronautique* and at the *Ecole Supérieure d'Electricité*, he participated in different scientific organisation congresses and was quoted in a number of articles and technical press.
- he often had very strong relations with a different interconnecting networks: he was part of the *Ecole Polytechnique* community that spread throughout French industry (Thépot, 1979) such as Laubeuf, president of the society of civil engineers in 1920s, Laurent Président of *Marine Homécourt* or Bellon, contributor to the magazine *Mon Bureau* (Lemarchand, 1998).

Georges Perrin was an *Ecole Centrale* student but isolated, a stranger to business circles. His career was limited to managing regional companies in the east of France or in Brazil. He was an unknown, belonging to no network or community who launched his project alone. He only joined the society of civil engineers in 1947 when starting and above all his communication policy was ambivalent.

2.3.2. A hesitant communication policy

Perrin had in mind, confirmed in an interview with Jean de La Villeguérin, being the author of a theory and promoting it, but on the other hand he feared his discovery would be looted, as he could not patent it. In October 1951, in his note *Bases doctrinales de la méthode GP et ses conséquences pratiques*, quoting the GP method's manufacturing constants theory, he wrote: "it does not seem that this theory is known either in France or overseas and has it has not been published nor divulged until now, the present note is of a confidential nature that the reader would kindly observe". Other notes discussing the GP method are titled "confidential notes". It was only from 1953 that he widely promoted his method via the press and conferences faced with the stagnating sales of his consultancy firm.

The presentation made to CEGOS by Mr Huet was done so, CEGOS specified in a letter, at the request of a few members. Moreover, this presentation was centred on staff profit-sharing.

His reluctance to share his "discovery", for fear of losing it also posed the problem of succession. In his consultancy, *La Méthode GP*, until his death, Georges Perrin was only accompanied by M Berry, already in old age and M Huet, who left soon after. These

departures took place suddenly, almost at the same time, and even in difficult conditions for M. Huet. Training was subsequently a constant problem for successors within *La Méthode GP* and for other consultancies later. This problem was aggravated by the conditions of succession that disorientated clients.

2.3.3. An engineer in the world of accountants

The GP method was basically an engineer's method proposed by an engineer. To implement it, analysis was the responsibility of men experienced in industrial organisational methods, a technique not mastered by accountants. According to Jean de La Villeguérin, Georges Perrin convinced managers of industrial companies with scientific training more easily than those whose financial or accounting directors did not master this method. Also, they opposed adopting it for fear of losing control over cost accounting.

It is more accountant's fears **de se voir déposséder de la maîtrise de l'évaluation des coûts par les ingénieurs** than its complicated nature that adversely affected it¹⁹. Indeed, the homogenous sections method was also considered as complex, just as its author felt. This extract of a remark by one of Rimailho auditors shows so:

In reality, as usual, Colonel Rimailho done something extremely complicated whereas Monsieur Bloch, whose problem was more difficult to resolve, set up a very simple organisation that works perfectly. We will attempt to obtain the many conferences held by both of them on principles of organisation. We certainly distrust colonel Rimailho who Monsieur Fould heard talk for six hours on this question of organisation without a managing to understand²⁰.

Both were inventors in many areas leaving a suspicion that they were brilliant but confused geniuses. Lemarchand found at the INPI (French patents office), (1998) 48 references to patents in his name between 1894 and 1950 in areas as varied as: photography, a rail-road vehicle and all types of braking and suspension devices. Perrin, among others developed in 1942 a flexible handlebar for bicycles and in 1955 developed a patent "concerning a command pedal for automobiles characterised by the fact that one single continuous movement on this pedal accelerates the car by acting on the accelerator or slows it down by acting on the break, so merging the current accelerator and break into one pedal".

2.3.4. A positioning that was too restricted

Odile Henry (1994) sees two periods in the development of consultancies in France: the period where Georges Perrin founded his consultancy was one in which a new generation developed, almost all from the *Ecole Polytechnique*, following productivity missions and where the number of such consultancies increased sharply. During this period, those who did not want to diversify traditional organisational skills and services experienced problems or even disappeared. Those that embraced information technology and above all strategy, sectors imported at the same time as the major American consultancies (Mc Kinsey, Arthur D. Little, BCG...) then the major Anglo-American audit firms survived. This was felt by Suzanne Perrin was sent during the associates meeting on 19th November 1969:

[...] the tendency towards concentration in consultancy firms, [...] the increasing difficulty that specialised firms like La Méthode GP, specialised in a specific sector, production costs, that companies need. have in operating. Companies also have

¹⁹Cette analyse est développée par Jean de La Villeguérin ancien dirigeant du cabinet d'expertise comptable *Fudicia* et associé de Georges Perrin.

²⁰Minutes of the meetings of the UIMM scientific organisation of work committee, written by Pézerat, representatives of Pont-à-Mousson, 17th November 1928. *Archives de Saint-Gobain*, PAM 45892 B.

other management problems and tend to use an organisation capable of providing different services.

To this it should be added the failure of Perrin and his immediate successors to take into account information technology.

CONCLUSION

To analyse the failure of the GP method, comparison with the success of the homogenous sections method is inevitable. Rimaillho was able to impose his system when no institutionalised practice existed. On the other hand, Georges Perrin and his successors often positioned themselves relative to the homogenous sections method that was already institutionalised. In this context, inevitable errors and hesitations prevented the GP method from winning a significant audience.

Today, the GP method has disappeared from the collective accounting memory and few university teachers make reference to it. In practice, it still survives with a new name, the Added Value Unit, encouraged by a network of consultants who with the help of users and some university teachers seek to promote it through an association and publications.

What is significant in this project that has survived for almost 50 years? There are perhaps in management few revolutionary inventions; Perrin himself was situated in a vague research tendency and was inspired by industrial practices. In management, there is sometimes an amnesia that forgets original and prolific authors. The so-called discovery of the limits of conventional cost management practices was already the subject of publications well before the 1980s by Georges Perrin.

The success of a managerial innovation depends highly on its institutional environment and relational environment of its conceiver. Its promotion seems to be close to that of a philosophical or political idea.

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