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## The Dissemination of Management Innovations through Consultancy in the Postwar Period

#### Introduction

The purpose of the paper is to fulfill and to refine the role of consultancy and professional bodies in dissemination of management innovations in the Inter- and Postwar Period that was in these days scientific management in Europe. The proposition is set upon the case of French consultancies and organizing bodies (i.e. professional societies and associations) and their activities to popularize the scientific management movement with a special reference to the Henry Bernaténé's output.

The choice of the Bernaténé's personage was dictated by the general notion that not only 'giants', major thinkers shaped the organisation theories but also minor ones. C.S. George (1972, p. 117) clearly stated: "Though these were field workers who laboured in the periphery, nonetheless their part in firmly establishing scientific management was critically important for mass understanding and application". In case of France there was a big division between engineering education and broadly defined management studies. Nevertheless engineers de facto were very important for the executives (as for example H. Fayol). M. Kipping describing the situation in French consultancies in the Interwar period stated that Taylor's followers were competing with the supporters of Henri Fayol, who focused more on the planning, coordinating and controlling than on scientific organization of the work process (Kipping, 1997, p. 70). The analysis of this situation in the post-war period was done by L. Boltanski (1983) and O. Henry (2002).

The proposed paper presents the results of investigation on the role and influence the consultancies and professional bodies in diffusion the scientific management in a consistent

framework. It explain the diffusion of one management innovation from the secondary center (France) to a periphery (Poland).

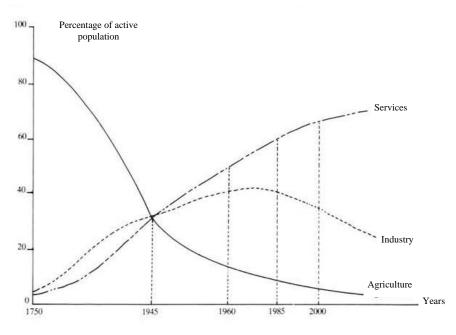
#### Background

#### French economy in the Inter- and Postwar period

French economic backwardness is a long standing topic since the beginning of the industrial Revolution in England. The relatively slow economic growth during the long 19<sup>th</sup> century and the surprisingly quick defeat in 1940 have strengthened these long received ideas after WWII. Two elements of this accepted wisdom are especially relevant in order to discuss the emergence of managerial innovation in France in the middle of the 20<sup>th</sup> century. First, at the end of the 19th century, France has been overtaken by the technological progress of Germany and the United States and secondly large modern firms were not to be found in France in the first half of the 20<sup>th</sup> century. Various culprits have been suspected to explain or excuse these apparent weaknesses following an early treatment of the issue by D. Landes (1949). This position began to be revised in the 1970's continuation of researches stressing various institutional or cultural features of economic development in various countries as Germany or Japan. Thereafter exceptionalism replaced backwardness. P.O'Brien & C. Keyder (1978) are representative of this historiographic strand: "Our central point is that something called relative backwardness cannot be inferred from characteristic features of French industrialization, even where they could be shown to differ from the British pattern. Industrialisation in France simply took place in a different legal, political and cultural tradition and it does not seem to be illuminating to single out elements of that process as symptoms of a relative backwardness, particularly when there seems to be a normative assumption in the typology that the 'English way' constitutes not merely initial but best of normal practice" (O'Brien & Keyder 1978, p.21). The development of economic studies devoted to various industries and firms lead eventually some historians to reject exceptionality as well as backwardness and eventually in his synthesis of four decades of discussions among economic historians in France and abroad, M. S. Smith concludes on "the normality of the French industrial experience — that is, its similarity to the British experience" (Smith 2006, p. 303).

From this historiographic reminder we can retain that modernisation of French economy was underway in the interwar period despite a "relatively slow development of big business" (Fridenson 1997) vis-à-vis the USA, the UK or Germany and a distrust for large firms as F. Caron stressed it: "France wanted to follow England without imitating its excesses,

and this dream of an industrialization « in the French style », avoiding excessively large concentrations of labor, dominated the whole of the nineteenth century" (Caron 1979, p. 35). This period (1880-1930)is characterizednot only bythe emergence ofnew industries(electricity, telephone) but alsoby a significantevolution of productivestructures and the use of labour. This change is manifested firstby the growth of theservice sectoror the tertiary sectorby referringto the theoryof the three sectorspresented byColinClarkandJean Fourastiébut alsobya rise inindirect labour compared labourdirectly related to productive activity -in a word, by the rise of white-collar workers. This evolution was detected by Jean Fourastié as soon as 1949 (two years before Wright Mills published his famous book '*White Collar: The American Middle Classes*'). The development of clerical work in the large French firms was perceptible very soon during the second Industrial Revolution. For example, administrative clerks in the headquarters of Saint-Gobain who represented 0.5% of the employees of the firm were 2% in 1900 (Daviet, 2001, pp.105-119).



**Fig. 1. Evolution of the distribution of the workforce in France** Source:(*Fourastié & Fourastié 1989*)

Secondary 5,9 6,1 6,9 5,	936
	7,2
Tertiary 5,3 5,8 5,8 6,	5,7
	6,3
Total 20,3 21,2 21,2 19	19,4

Source: (Insee, 1968, p. 102).

Even if statements by Insee and Fourastié (father and daughter) differ slightly due to some differences in definition, we can admit that tertiary labour surpassed secondary during the interwar period in France. To cope with these dramatic changes great attention should be paid to organization issues. Therefore it is interesting to notice that changes were underway since the end of the 19<sup>th</sup> century. Whereas in the family capitalism of the first 19<sup>th</sup> century, one was used to expect to find embodied together in the family ownership, professional competence transmitted from man to man, long experimented proximity with products and markets, which provides a source of credibility, qualification provided by a certificate gained ground after the second industrial revolution. Heritage is no longer enough to access at the top of the firm (ibidem). France used to a dual system for higher education since the end of the 18th century "Universités" and "Grandes Ecoles"; Most of the second were established by branches of the state the most prestigious of all, École Polytechnique, during the French Revolution, to provide for the army and public works building. This concern with the state interests explains that Saint-Simon's ideas were very popular among the pupils of the Ecole Polytechnique and some of them developed Saint-Simonian notions practically and involved themselves in the development of the French economy, founding a number of leading enterprises in the banking sector as well as in the industrial one. By the end of the 19<sup>th</sup> century. firms began to hire graduates from Polytechnique and other grandes ecoles and at the beginning of the 20<sup>th</sup> century. But "highly skilled engineers represented 0.5 percent of the industrial working population in 1913" despite several universities have created applied institutes in order to increase the number of engineers. at most 3 percent of the workers had received a vocational training. Besides training in economic and business matters was very unsatisfactory. It is not that France had not plenty of thinkers in economics and business management. Jean-Baptiste Say, the famous French classical economist underlined the part played by the entrepreneur, Augustin Cournot was a pioneer in the study of market structures, and Jules Dupuit, a civil engineer (Polytechnique) and economistinpricing theories. But the institutionalization of economics in French higher education system was very slow and piecemeal in the 19<sup>th</sup> century whereas the part devoted to management was very reduced. For example in Colson's lectures delivered at Polytechnique there are only a few very general pages devoted to business administration (Colson 1927). That is not to say that there were not books about management. For example Courcelle-Seneuil's Manuel des affaires (Handbook of business) went through several editions after 1855 and sold more than 20000 copies. But the split between training in engineering and economics was very large and if exaggerating, Fridenson is not wrong when he puts"Before World War II, the share devoted to economics

was minuscule and business administration was ignored" (Fridenson 1997, p.218). But French managers were conscious of the part played by organization issues and eager to improve their competitiveness in this regard. It is not surprising that the dissemination of Taylorism began as early as 1906 in France thanks to Henry Le Chatelier, an engineer (Polytechnique) who left an industrial career to become professor in the higher education system and researcher and thereafter came back to industry in order to apply his discoveries. He discovered Taylor's ideas in 1906 and published in 1907 several of his articles translated into French in Revue de la metallurgie, a journal he has recently founded. Le Chatelier considered that the "one best way" proposed by Taylor could be used for a basis for a science of action applied not only to businesses but also to every activity. Taylor would become an obligatory reference point and continues to be regarded as one of the 'founding fathers' of the scientific organization movement but a second founding father in France deserves to be mentioned. Henri Fayol another Polytechnique engineer - whose major work, 'Administration industrielle et generale' was published in 1916, at the end of Fayol's long and successful career as an industrial manager. While not all members of the movement would be engineers, the emerging science of organization would be deeply marked by the engineers' preoccupation with systems and efficiency (Clarke 2011).

The success of Taylorism in the industry and more generally the concern with organization during the First World War promoted during the interwar period the rapid development of a new population of experts and consulting engineers both within the state administrations and the industrial firms. the postwar period saw the creation of several groups dedicated specifically to promoting scientific organization. Three centres appeared between 1918 and 1924 the Taylorist Comite Michelin, the Fayolist Centre d' etudes administratives, and the Conference Française de l' Organisation, which grew out of conferences held in 1923 and 1924 on the initiative of a group of business journalists and organizational consultants. From 1926, the more durable Comite National d'Organisation Française (National Committee for French Organization, CNOF) provided a new institutional home for members of all three earlier centres.

This impetus for rationalisation and scientific organization was increased further after the 1929 Wall Street stock market crash and the Great Depression. Then former students of Polytechnique createdGroupe X-Crise (or X-Crise) in 1931 as a consequence of the 1929 Wall Street stock market crash and the Great Depression. Formed by former students of the École Polytechnique (nicknamed "X"),most of them advocated planisme, or economic planification, as opposed to the then dominant ideology of classical liberalism which they held to have failed. These projects extended to the whole economy the recommendations they used to address to industrialists for the management of their businesses.

During this period Jean Coutrot, a fascinating character, is the prophet of rationalization and possibly a mentor for Henri Bernaténé. Born in 1895, former student of Polytechnique, wounded and mutilated during the first WW, he will be successively or simultaneously, businessman, management consultant in organization (with a Dutch engineer Ernst Hijmans), head of the Association of paper and packaging industry, he played an important part in X Crise but also in the CNOP. He created in 1935 the School for scientific organization of labour. Eventually in 1936 he worked with Charles Spinasse, minister of the national economy in the Front populaire government. His many efforts were rewarded in November 1936 by the creation of the "Centre national d'organisation scientifique du travail pour l'abaissement des prix de revient français"<sup>1</sup> After the defeat of 1940, he was rejected by the Vichy government and depressed he killed himself in 1941. If his exhortations were not totally heard, they were not forgotten after his death. Attaining US levels of productivity became a mantra for the postwar French economic policies when Jean Monnet and Jean Fourastié through the missions of productivity lead a "crusade for efficiency" (see. Boulat 2008).

It is worthwhile to remark that almost all these crusaders (Le Chatelier, Fayol, Coutrot, Monnet and even Fourastié) developed their ideas outside the higher education system which did not include business administration as a separate field before the 60's whereas business schools were more eager to train inheritors than to improve French competitiveness.

This background (how schematic it is) is necessary to understand the career of Bernaténé on the one hand and the reception of the BG diagramme on the other hand.

Anyway these various concerns explained that the leitmotiv at the end of WWW II was «enhancement of productivity» (see Boltanski's paper).

In the view of the authors, concerns with productivity were not supported by academics because they were marginal vis-à-vis the division of topics in the French higher education. French economist engineers were more interested by plans (Soviet or Dutch style), for economists in Faculties of law; economics of firms did not appear to be an interesting topics. The business schools stood apart from the academic world and were more concerned by accounting and marketing.

<sup>&</sup>lt;sup>1</sup> In English, "National center for the scientific organization of labour to reduce French cost prices" so that Coutrot designated the center by the acronym COST.

Moreover as they could find their way in academia, people interested by these topics tried to make their living through consultancies (maybe some could have preferred to make their living through consultancies instead of finding their way in the academic jungle) (see Kipping and Nioche). Besides it is quite possible that firms were more confident picking up ideas about management from consultancies than from academics.

Worth mentioning is French anti-Americanism which includes many strands but they converge despising American ideas (there cf. Boltanski).

This background (how schematic it is) is necessary to understand the career of Bernaténé on the one hand and the reception of the BG diagramme on the other hand.

The data sources come from the elaborations covering mentioned period (Bernaténé, 1949; Devinat, 1927; Boltanski, 1983; Kipping, 1997, 1999; Kipping et al., 2008; Girard nd.; Henry, 2002, 2004, 2006; Champsaur and Cailluet, 2010), but also from the investigation of the Bernaténé's professional life identified on the basis of his works and also on bibliography of some of his coauthors of 1946 (especially Charles Voraz).

#### Consulting in France

It is common assumption that the beginning of the management consultancy in France was driven by engineers (Kipping, 1997; Caulluet and Kipping, 1999). This view is supported by identification of foreign (mostly American) influence. Two strands appeared. One was run by engineers, fading in the French consulting market in the 60s. The second direction was human oriented and thus represent the 'soft' side of management. The diversification took place after the WWII. The consultancy market had started to be difficult and some of the consultants turned into academic institutions or started to join to professional bodies in order to strengthen their positions.

In this development a role was played by professional associations namely referred to Association française des conseils en organisation scientifique or AFCOS (1940s.) and Commission générale d'organisation scientifique or CEGOS (1930s.) (Cailluet and Kipping, 1999, Henry 2002) (tab.2).

Abreviation	Full name	Year of establishment
CNOF	Comité National de l'Organisation Française	1926
CGOST	Commission générale de l'organisation scientifique du travail	1926
CEGOS	Commission d'Etudos séréndo dos Onseniostions	1936
CEGOS	Commission d'Etudes générale des Organisations,	(renamed CGOST)
AFCOS	Association des conseillers en organisation scientifique	1949
AFCOD	Association française des firmes de conseillers de direction	1950s/1960s.
AFCOD	Association mançaise des mines de conseniers de direction	(renamed AFCOS)
AFOPE	Association Française des Organiseurs Permanents d'Entreprise	1958

Table 2. Main French associations devoted to organisation studies

Source: own elaboration based on: (Kipping, 1997, Henry 2002, Bulat 2008, Boltanski 1983)

The consultancy's services were dedicated mainly for productions. New area of expertise has appeared such as organisation of administrative work. In this paper the special attention is given to this one as an example of creating subfield in the main discourse of scientific management aiming to solve office problems. Presently we would called this information sciences. The administrative and bureaucratisationissues, "rationalisation" of daily management, were despised by prominent consultancies and academics within the analysed period.

#### The Case of Henri Bernaténé

#### *H. Bernaténé biogram<sup>2</sup>*

H. Bernaténéwas born in 6<sup>th</sup> May in 1906 in Lunéville. His father, Peter was a butler, his mother Caroline Knoetgen a cook. They had left the annexed province of Alsac. After completing the primary school, he had finished the studies in private management and accounting school. He did not served in a military because of hip fracture and bad medical treatment that blocked his growth. He started the work as an administrative employee at Electro-Cables in Paris, that was one of the Thomson's subsidiary. Next he worked for Ferodo Company, the subsidiary of British firm specialised in brake linings (now Valeo Group), in St. Ouen between 1937-1941. It was a turning point in his career. In view of his abilities and skills, his supervisor advised him to move towards a new direction – the organization of work (work studies). He took the courses in l'École d'Organisation Scientifique du Travail de Paris and Conservatoire National des Arts et Métiers (CNAM).

<sup>&</sup>lt;sup>2</sup>The authors obtained the data from Henri's son, Michel with whom the CAWI was conducted. The authors would like to thank him for support.

The third job was in organisational consultancy. He was hired by the Department Stores Decré in Nantes and he became deeply involved in this business. The Bernaténéfamily moved to this city in 1942. After heavy bombardments in September 1943 they decided to come back to Paris. There, Henri was hired by Robert Satet and became his pupil. In the preface to his book "How to design and conduct a literature", Robert Satet wrote "it is the purpose of the work of our student and friend BERNATENE who, following the advice of Leonardo da Vinci, took care to build practice on a good theory". The co-workers were H. Grün, Paul Planus, and Leon Gingembre.

Henri left the Satet Consultancy in 1949 or 1950 to create his own business. His first clients led him to Lyon (knew anyone there previously) in particular in the cardboard industries and this has snowballed. His seriousness was appreciated by Lyon businesses, thanks to an ongoing activity for this city and region and recognition (Rotary, Business School). He finally settled in Lyon and remarried in 1954. He had no access to foreign works, as he spoke any foreign language. In 1976 he settled in Champagne, Villadin (10) where he died December 30, 1995. In addition, he was a great lover of classical music, a good violinist and composer of sonatas for solo violin and string quartet.

The professional life of Bernaténé must be complemented by his writings which let the public get acquainted with his achievements. Bernaténé's output consists of articles andbooks. Two papers were published in the journal with international range.One in the "Revue international des sciences administrative" which was and remains a "scientific journal", the second – in "Travail et Méthodes", a review which was very specialized in topics which are now largely dealt with either in computer science or information science.Moreover analysis of affiliations provided in these publications allow to identify his memberships to the professional consultancy bodies.

Bernaténé's name started to appear in literature at the beginning of the 1950s. (see Appendix 1). His book titled "How to manage the enterprise" from 1949 was quoted in 1952. What is interesting the publisher of this book was CEGOS, which is an important player in the fieldof organization science. He is also mentioned in the compiled annual bibliographyelaborated by L.W. Smith in "The American Archivist" in 1952.

In 1951, Bernaténé published a book about documents. He is described as organisational consultant, professor in l'École d'Organisation Scientifique du Travail in Paris and Bruxelle, but also as a president of C.A.M.O.R.E and *membre-patron* of A.F.G.O.S (sic!). The latter is misspelled abbreviation from Association Française DesConseillers De Direction (AFCOS) created by the consulting engineers specializing in work organization in 1939

which renamed in 1950s as the Association française des firmes de conseillers de direction (AFFCOD) representing mostly firms (Henry 2002, p. 29). The president of AFCOS was L. Danty-Lafrance, ex-president of CNOF and professor in Conservatoire Nationaledes Arts et Métiers (CNAM) (Boulat, 2008, p. 135). It explains why Bernaténé as a director of C.A.M.O.R.E decided to join this group.

In the "Technica" journal, no. 83 from 1964, there is a short info about a new book written by organisational consultant and professors from l'École d'Organisation Scientifique du Travail. But in other book published in the same year dealing with document management Bernaténé is presented as organisational consultant, member of AFCOD and *former* professor in: l'École d'Organisation Scientifique du Travail de Paris, l'École de Formation des Cadres de Lousanne and l'École Supérieure de Commerce de Lyon. Three years later, in the 5<sup>th</sup> edition, he become the present professor of the first mentioned above university (Bernaténé, 1967).

Looking at his books one conclusions can be make: Bernaténé's main concern was about "documents" (elaboration, circulation, storage).

#### Bernaténé and his professional bodies

The Centre d'Application des Méthodes d'Organisation Rationnelle CAMORE (or CAMOR) was run by H. Bernaténé in 1959. This organisation was helping the Council of State in Vaud (one of the state of the Swiss confederation with Lausanne as capitol) to improve its administration (Coutaz, 2006, p. 83). Additional data about Bernaténé's activities were obtained thanks to Gilbert Coutaz, the Director of "Archives cantonales vaudoises" who delivered following information to authors.

The first contact with Bernaténé took place in 1959 as the result of undertaking the efforts on rationalisation of the administration. The training course was planned to be conducted by Bernaténé from January 11 to 12 February 1960. Cooperation with Council of State had been continuing till 1963 according to the note from February 18, 1963. Moreover the research in telephone directoriesallowed to locatedthe presenceofCAMORin Lausanne, between 1959 and1965/1966. CAMOR'saddresses: anavenueof Evian(1959/1960-1961/1962), then4FlorimontAvenue, but none of them was Bernaténé's address. The address"30 BeaulieuLausanne"appearson the formfrom HenryBernaténé, Director ofCAMOR, but it is not confirmed as actual.It seemsthattheCAMORhad nofixed office, and that Bernaténéwas actually from Lyon.

In the 60s. H. Bernaténé described himself as organizational consultant in Association Francaise des Conseillers en Direction (AFCOD), director of Centre d'Application des Méthodes d'Organisation Rationnelle (CAMOR) and professor in the 'l'École européenne de formation des cadres supérieurs des entreprises' in Losanne.

These organisations accompanying with Bernaténé's name are less known than mentioned earlier CEGOS, or elder CIOS and CNOF (Henry 2006), but they play a significant role in France. Affiliations can be a sign of distinguishing (member of AFCOS), but also can be treated as a manifestation of independent activity (director of CAMOR).

#### Roger's diffusion model

The paper is based on theoretical background elaborated by E. Rogers (2003) in his diffusion innovation model that is widely accepted by scholars (Lovett, 2002; Treanor, 2002; Cheng et al., 2004; Mikl-Horke, 2004; Murray, 2009; MacVaugh and Schiavone, 2010). The authors decided to investigate elements related to communication channels: diffusion networks and change agency that applied the mass media and interpersonal channels (Rogers, 2003, p. 11). Another approach for explanation the diffusion of management knowledge is the cognitive-cultural perspective expressed in 'travel of ideas' and management consultants as 'carriers' or 'medium' (Faust 2012, p. 142, 145). The carriers can be perceived as communication channels in Roger's theory of diffusion. The Actor-Network Theory supplements the diffusion of innovation by the explanation given to the "translation" process (Berland, Levant, Joannides, 2009). It emphases the importance of actor who shape the idea and changeability during the travel (Faust, 2012, p. 141).

According to E.M. Rogers (2003, p. 11) "diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system". Four key terms are: an innovation, communication channels, time, and a social system. In this paper we identify B-G chart<sup>3</sup> (G stands for H. Grun<sup>4</sup> – co-author of this tool) (fig. 3) as innovation, communication channels as professional societies, and social system as professionals dealing with the consulting and research issues. Span of time period in this case study extends from 1950. till present days. Direction of the diffusion: France–>Poland<sup>5</sup>.G. Mikl-Horke (2004) argues that innovations in the field of management are mostly diffused to

<sup>&</sup>lt;sup>3</sup> In Polish literature the most popular name for this tool is Bernatene-Grün's chart.

<sup>&</sup>lt;sup>4</sup> Or Grün (cf. Cubiles 1966, p. 58). The data about this person are incomplete and difficult to track down.

<sup>&</sup>lt;sup>5</sup> In Polish literature about scientific consulting mostly presented by Z. Martyniak (1993) the French representatives up to 1940s. are: industrial engineering current: Ch. Bedaux (but usually perceived in terms of his success in the U.S.A.), H.L. Le Chatelier, Ch. de Freminville, Michelin brothers; universalistic current: H. Fayol, humanistic current: H. Dubreuil, E.F. Rimailho.

the Central and Eastern European Countries by Western companies. This remark refers to the 1990s. but taking into account the results presented in the paper, it should be supplemented by the influence of consultancies.

#### Diffusion of B.G. graph

Additional reason for choosing H. Bernaténé come from the success of diffusion of one of his work concerning graphic notion in Poland. This so-called B.G. diagram is a graphic tool visualising process using the form and symbols (Bernaténé) (Figure 1). Its construction resembles the common flowcharts and other contemporary business process mapping techniques. The first mention about the B.G. graph was found in 1951. Bernaténé quoted his «diagramme» in his subsequent publications.

The primary reference in Polish literature derives from the three pages long article coauthored by Lisiński and Siedlarz in 1976 (Figure 2). They present the B.G. diagram from the book edited by C. Hauwel<sup>6</sup> in 1972. The following publications mentioning this tool are based on this (*Organizacja...*, 1986; *Nowoczesne...* 1993; Jedynak, 2011, Potocki 2011, Czekaj 2012). The search of the exact Polish name for it using the Google web engine shows 7 410 hits. Especially significant is the zero hit after excluding the Polish term of the chart. One can say that in other national literature there some variants of its name are used, for example the same as in Bernaténé work. Analysis of the results obtained after the search of alternatives phrases, such as "B.G. diagramme", "B.G. chart" revealed that none of the hit referred to the actual Bernaténé's solution. Therefore conclusion can be formulated about popularity of this tool in Polish literature.

Analysis of the description of the B.G. in the literature revealed that it is treated as an important tool in Value Analysis (*Nowoczesne*... 1993, p. 12) in spite of that it is not included in the SAVE's Body of Knowledge (Value *Standard*, 2007) nor ISO 12973:2000 standard (Value Management, 2000). Others references concern information management and documents circulation.

The authors describing it in peer-reviewed publications are mainly affiliated to Cracow universities.

<sup>&</sup>lt;sup>6</sup> In M. Lisiński and R. Siedlarz's work is a misspelled name of the editor: C. Hau<u>v</u>el.

#### Data discussion

The gathered data allow to apply the underlying diffusion theory. In terms of Rogers' diffusion theory early adopters are researchers who also act as consultants. But one remark needs to be formulated. The diffusion of B.G. chart is mostly in literature. This tool was mainly employed during scientific researches on information processes carried out by scholars or is a proposition while discussing possible mapping tools.

The most significant communication channels were publications that can be counted as one of the type of mass media. Access to the foreign journals was limited on these days in Poland and the most convenient form was to be familiar with the monograph reviewing contemporary solutions employed and considered as the best in the given time. It supports Roger's generalisation no. 5-13 stated that "mass media channels are relatively more important at the knowledge stage" (Rogers 2003, p. 205) and generalisation no. 5-14 "Cosmopolite channels are relatively more important at the knowledge stage" (ibidem, p. 207). Knowledge stage is the first one of the innovation-decision process. It consists of 3 steps: recall of information, comprehension of messages and knowledge/skill for effective adoption of the innovation (ibidem, p. 199). ThereforeBernaténé works can be treated both in terms of mass media and cosmopolite. Transferring innovation such as BG chart occurs via channel from a source to a receiver. This is: from Bernaténé to Polish scientists and research and through their publications to the larger audience. Using Internet caused further diffusion of this tool.

#### Discussion

The authors explain this phenomenon by the fact that pioneers of scientific management movement in Europe could not compete with Americans at the world level, but they could infuse their ideas in some countries where people were more reluctant to the sophisticated models elaborated abroad in culturally different environment. Translations of Bernaténé works to Spanish (Cubiles 1966, p. 58; Giopp 2005, 218) are also a proof of such process. In the French case the scientific management (operation research, production management, budget control, etc.) was never easily inserted in the business school mainstream and engineers trusted more consultancies which spoke the same language as them. After the 1970s, this line of research produced some hybridization as the French diploma called MIAGE (*méthodes informatiques appliquées à la gestion des entreprises*) (they played an important part for inventory management, planning, etc).

The limitations of the study refers to the scope of analysis. Bernaténé books were appreciated by Spanish and Portuguese readerships and he received some proposals to establish in Mexico but these projects were not realized.

#### Conclusions

The authors have chosen the historical institutionalism approach in order to describe the different effects in a systematic way and provide the basis (framework) for further researches. The institutionalism view was applied in order to investigate the role of the French professional bodies such as: Centre d'Application des Méthodes d'Organisation Rationnelle (CAMOR), Association Française des Conseillers du Direction, Ecole d'Organisation Scientifique du Travail, and CEGOS. It is supplemented by communication channels taken from the Rogers' diffusion model mentioned above. This perspective allows to approach more systematically to analysis of particular contributor who stepped into organizations for support of his/her efforts.

The authors argue that is spite of a common assumption about significant role of consultancies in the dissemination of management innovations (cf. Kipping, 1999), there still exists the research gap in the form of lack of in-depth analysis of their particular impacts and actual positions in this process. Therefore there is no well established classification of the roles that consultancies have played, especially referring to 'minor' contributors. In Bernaténé case the authors deduce from different quotations (Coutaz, 2006) that he was not succeed and probably moved from Lyon to Lausanne in the 1950s. This observation is supported by Henry's notion about hard time for French consultants in the Interwar period (Henry, 2002, p. 26).

In authors' opinion the French engineers were fascinated by scientific management and tried their best to introduce rationalization in order to enhance productivity and cope with the Americans. If they could not succeed in running companies at least they have tried to monopolize consultancies. In this rationalisation fever some devoted themselves to – one may call – peripheral topics (vis à vis production) as documentation, administration or accountancies. This is especially the case of H. Bernaténé whose works counted in tens and were quite often re-edited.

The main findings show and explain changing roles of consultancies and supplementing influence of professional associations which strengthen their position. The forms of diffusion are still valid in spite of current impact of ICT, e.g. professional societies are now expressed in Internet social networks. The authors believe that proposed methodology could be applied for examination of other theories. This conclusion is in line with the similar notion about the economists who can be perceived as innovators (Faulhaber and Baumol, 1988).

However proposed work has the second purpose namely to create a common framework for assessing other examples of diffusion of management innovations. It shows that historical approach allows to refine the complicated issues despite of its simplifications caused by fading contrasts existing in a given period and petrified in documents.

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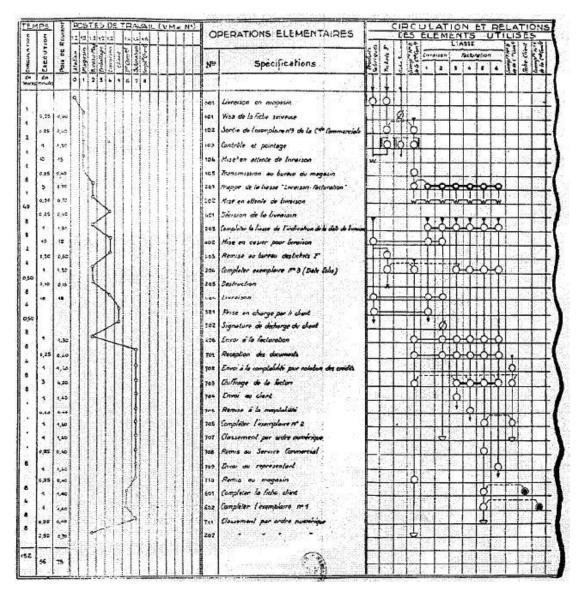
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#### **Appendix 1**

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#### Fig. 3. Example of BG chart

Source: (Bernatene 1949, p. 15).

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Fig. 4. The first example of B.G. chart in Polish literature

Source: (Lisiński and Siedlarz, 1976, p. 521)