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*a*UTHORITARIAN SPACES: THE RAILROAD NOROESTE DO BRASIL AND THE EMPIRE'S BUREAUCRACY

ABSTRACT

This essay deals with the Strength of Authority in the Brazilian Public Administration. It discusses the administrative structure and draws attention to the influence of The Principles of Scientific Administration by Frederick Taylor used at the Northwestern Brazilian Railroad, as regards the the distribution of office space and right of speech. As legatees of the authoritarian administration brought over by the Portuguese Royal Family, we were already quite familiar with a bureaucratic model. The organogram and fluxogram tools of social production have always taken for granted the division of work associated to practices of control and close inspection. The gap between those who order, and those who must obey, has always been the main feature of the duties allocation practice. Even when Taylorism was later replaced by other so called "democratic theories", such as the Theory of Human Relations, the aim has always been that of intensifying the exploitation of the labourers by destituting them of their power. The practice of administrative organizations following organograms has set apart and helped increase the gap between those who were in command and those who were there to obey unquestioningly, and unknowingly. Fluxograms were very effective tools when it came to installing the power of those who must detain the information and those who must needs remain uninformed. Any form of approximation between the two groups was made virtually impossible. This authoritarian managerial model still persists and pervades through the Brazilian Public Administration.

KEYWORDS

Administration. Frederick Taylor's Theory. Northwestern Brazilian Railroad. Brazilian Empire. Bureaucracy.

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ESPACIOS AUTORITARIOS: EL FERROCARRIL NOROESTE DO BRASIL Y LA BUROCRACIA DEL IMPERIO

RESUMEN

Este ensayo se ocupa de los espacios del poder autoritario en el gobierno de Brasil. Se inicia con la estructura administrativa, así como los espacios de sus oficinas bajo la influencia de la administración monografía científica Principios del ingeniero industrial Frederick Taylor en el ferrocarril del noroeste de Brasil. Sin embargo, ya se sabía que las administraciones autoritarias desde la llegada de la familia real portuguesa al país cuando trajeron el modelo administrativo en la forma de una burocracia. El advenimiento del organigrama y diagrama de flujo para gestionar espacios de producción social siempre se ha guiado por el diseño de la extrema división del trabajo asociado con los controles y prácticas de vigilancia. La separación entre los gobernantes de los que obedecen fue el tema central de esta división del trabajo. Incluso cuando el taylorismo fue reemplazado por otras llamadas teorías democráticas, como la Teoría de las Relaciones Humanas, la intención fue siempre la de intensificar la explotación de la fuerza de trabajo a través de la desestimación de su poder. La práctica de las organizaciones administrativas diseñadas por cartas de extrema división del trabajo ha servido para separar los gobernantes de marcha con la ayuda de diagramas de flujo dirigido el curso de la información que mantiene desinformados e informado a los que obedecen los que deciden y dificultando el acceso de los primeros a los segundos. Se puede decir que esta gestión práctica autoritaria persiste hoy en el gobierno brasileño.

PALABRAS CLAVE

Estructura Administrativa. Teoría de Taylor. Ferrocarril del Noroeste de Brasil. Imperio. Burocracia

ESPAÇOS AUTORITÁRIOS: A ESTRADA DE FERRO NOROESTE DO BRASIL E A BUROCRACIA DO IMPÉRIO

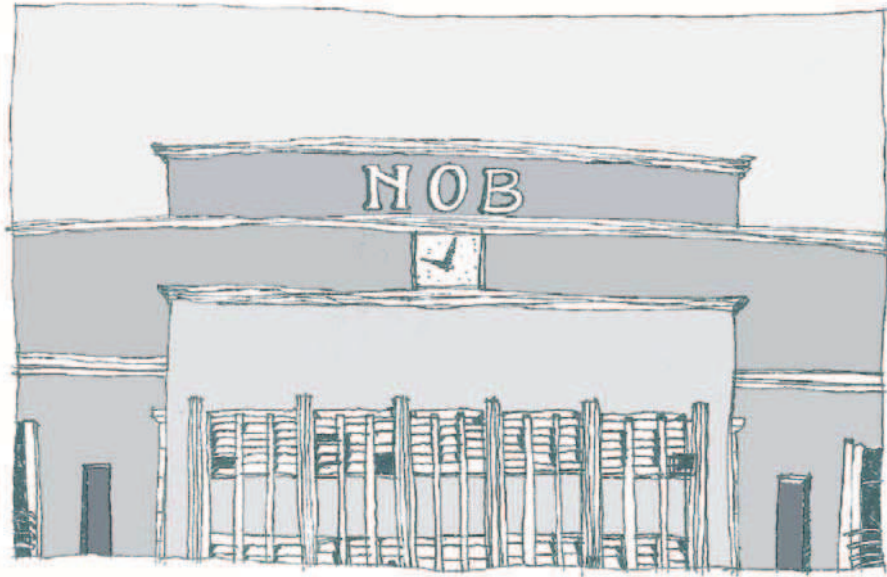
RESUMO

Este ensaio trata dos espaços do poder autoritário nas administrações públicas do Brasil. Parte-se da estrutura administrativa assim como dos espaços de seus escritórios sob a influência da monografia *Princípios de administração científica* do engenheiro mecânico Frederick Taylor na Estrada de Ferro Noroeste do Brasil. No entanto, já se conhecia as gestões autoritárias desde a vinda da família Real Portuguesa ao país quando trouxeram o modelo administrativo no formato de uma *Burocracia*. O advento do *organograma* e do *fluxograma* para gerenciar espaços da produção social sempre se pautou pelo desenho da extrema divisão do trabalho associada a práticas de controles e vigilância. A separação entre os que mandam dos que obedecem foi a tônica desta divisão do trabalho. Mesmo quando o taylorismo foi substituído por outras teorias ditas *democráticas*, como a *Teoria das Relações Humanas*, o intuito sempre foi intensificar a exploração da força de trabalho através da destituição de seu poder. A prática das organizações administrativas desenhadas por organogramas de extrema divisão do trabalho tem servido para separar os que mandam dos que executam auxiliadas por fluxogramas direcionados ao curso das informações que mantém desinformados os que obedecem e informados os que decidem e dificultando o acesso dos primeiros aos segundos. É possível dizer que esta prática autoritária de gestão persiste ainda hoje nas administrações públicas brasileiras.

PALAVRAS-CHAVE

Estrutura administrativa autoritária. Teoria de Frederick Taylor. Estrada de Ferro Noroeste do Brasil. Império. Burocracia.

Figure 01: Facade of NOB.
Design Pedro Hungria Cabral



INTRODUCTION

This essay deals with spaces of authoritarian power in the government of Brazil. It starts with the administrative structure as well as the environments of their offices under the influence of the study: "Scientific management principles" wrote by Frederick Taylor used in the Northwest Railroad in Brazil. However, the authoritarian administrations were already known since the arrival of the Portuguese Royal Family to the country when they brought the administrative model in the shape of a bureaucracy. The advent of the plan and the flowchart to manage spaces of social production has always been guided by the design of the extreme division of labor associated with control and surveillance practices. The separation between the rulers of those who obey was the keynote of this division of labor. Even when Taylorism was replaced by other so-called democratic theories, such as Theory of Human Relations, the intention was always to intensify the exploitation of the workforce through the dismissal of its power. The practice of administrative organizations designed by charts of extreme division of labor with the chain of command has served to ensure exploitation of labor policies. The flowchart enables the direction of the information making uninformed lower levels. You can imagine that the practice of authoritarian administrations persists nowadays in a different way because the virtual world has also become a way for man's exploration.

TAYLORISM

Taylor's theory arose in the early 20th century in the United States of America (USA) as a methodology - and political - business administration. Based on the planning work and intended to "rationalize it."

To make such it "a policy", it organized a team of experts in charge of planning the procedures for all activities and standardize them according to the best way, the scientific way.¹

The environment of the office has become the brain of the company, where it would be produced the planning. An intense internal division of labor, in the form of departments has allocated those who think and those who perform this thinking.

The organization chart divided the work activities, ranking them. The flowchart defined the direction in which the information would go, always linear and ascending / descending.

As the division of labor extended, it increased the number of employees. The chart created a structure composed of presidents, directors, managers, chiefs, deputy chiefs and finally the operational staff. The flowchart held the following guideline: the worker responds only to their immediate supervisor.

The organization chart and flowchart have been adapted to follow Taylor's idea. Not only them, but all the elements that comprise the office, such as the furniture, the layout space, the tools used.

[...] What made Taylorism notable was that it showed there was a much larger source of loss than the anarchy of the forms of production. Although the factory system had already introduced the separation between manual labor and intellectual work within the work process, the specific tasks of each worker were still left in his hands. Work was taught orally by the workers themselves to each other which meant that several ways of doing the same task coexisted. Taylor would say that every task and every move of every worker has a science, a knowledge that makes it professional, then you should choose the best among several solutions, the most rational way to run up an operation should be the most profitable one. Consequently there should be a science for each type of work, the determination of tasks should not be left to the workers themselves attached to their tradition, but it should be studied, classified and



Figure 02: Light the offices in the building Alexander Mackenzie

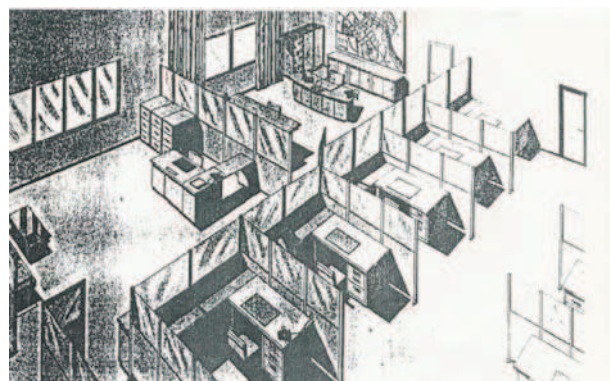


Figure 03: Catalog Tecnogeral (Securit), 1956

systematized by the working scientists using the scientific management. It is about separating the phases of planning, design and direction in one side and the execution of tasks on the other one. (RAGO; MOREIRA, 1984. p.19)

The design of a table, for example, has divisions that separated and organized work according to the instruction manual. This helped vigilance, because at any moment the boss could surprise the clerk asking him a tool and if one does not find in time what was requested, he could be punished.

The condition of science attributed to Taylor's ideas emerged from studies of time and movements, subordinated to the logic of mathematics.

As the company was divided into departments, they also suffered internal divisions. Taylor's layout focused on organization chart hierarchy, also influenced the direction of the flows of information produced. The organization of the employees was inspired by the organization of an assembly line that is why the tables were arranged one next to the other and one behind the other and the supervisor's desk left in a surveillance position, isolated and in closed room also for supervisors, managers and directors.

In the first decades of the 20th century, the organization of work process in office was inspired by the work of the factory process, specifically in the organization of manufacture (cooperative process). The notion of Central Office, followed by the Administration Building, was the result of the initiative of the secondary sector of the economy to bring into the production area some activities belonging to the tertiary sector (administrative services, for example).

It stood then in a period of history of capitalism when an intense movement of centralization and concentration of capital has transformed the economic landscape in a tangle composed of complex oligopolies, defining a new development model.

In this context, it was promoted to reorganize the social division of labor. The secondary sector (industry), politically and economically hegemonic absorbed parts of the tertiary sector (services). This undervaluation of one of the sub-sectors of the service economy has given rise to what we now call Modern Office.

In Europe and the USA, that moment concur with the first rupture in the relations of property, when the personal power of the 19th century captain of industry was given to a managerial entrepreneurship.

In this context the theory of Frederick Taylor of organizing production came true using labor via cooperation and added a giant vertical structure, for the control and planning of all stages of work. A set of specially trained staff to control and plan the company was mobilized. He called this number as: Entrepreneurship Management. In Taylor's design the management would be the brain of the company and the employee, its body, thought that the brain would rule the body in a Cartesian view.

Taylorism proclaimed itself a rationalization process. This rationalization was based on mathematical logic to receive the status of science. The cooperative system in which many work together and according to a plan, created the collective worker, which gave rise to the departmental structure.

The departmentalization expressed a social division of labor inside the company itself: a fragmented structure, divided internally. Thus we have what was called a complex cooperation process.

Taylor has standardized all procedures. His main concern was to structure a control system in which all stages of the work would be defined by a plan department by applying methods which would treat issues by location and ideal execution time of a function, the employee profile and the type of tool being used everything would be normalized and turned into pattern with the intention (implicit) removing the employee initiative and make its mechanical actions prevail, also in order (explicit) to extract higher levels of labor productivity.

The division of labor process was the first technique designed to obtain the level of productivity to increase, and the time spent on the production process was the first way of measuring it. Just as the manufacture obtained its second phase with the introduction and evolution of the machines in the factory system, modern offices also inspired this evolution, opened their spaces to machinery and similar productivity of technical innovations.

In 1917, a book called “Scientific Management of an Office”, which reported on the results of the application of the Taylor system of Scientific Management to the offices, was published in New York, Chicago and London. A professor at New York University called Galloway, published principles and practices on this book.

Taylorism followers stipulated a time for all activities in the office, they wanted to control all movements in all stages of all work obsessively.

Action of opening/or closing	Minutes
Open or close folder	0,04
Open or close file drawers	0,04
Open or close desk drawers	0,014
Open central drawer	0,026
Close central drawer	0,027
Open lateral drawer	0,015
Close lateral drawer	0,015
Chair activities	Minutes
Get up from the chair	0,033
Sit down	0,033
Move the swivel chair	0,009
Jogging on the chair	0,054
Pick up or drop pencil or pen	Minutes
Numerals (by number)	0,01
Printed characters (each)	0,01
Normal (full, by letter)	0,015

The cutting with scissors should take 0.44 minute and 0.30 for each additional cut. Each cut with scissors was set to move forward and close the scissors. Tables were created and studied to be erased, check and stamped, put it aside, stamping one page and put it aside, including time to moisten the stamp every 4 procedures. They built up the tables to be pasted, joined, separated, handled, changed the place and materials, counted, doubled ... a time unit was calculated to find articles at random, start a new file, create file in numeric or alphanumeric order. The time to type was the subject of thorough analysis. The standard patterns of words per minute were tabulated in minutes per inch; Furthermore, they stipulated time to take the paper, insert it in the machine, Squaring, deleting, making corrections and also handling the material.

THE ADMINISTRATIVE STRUCTURE OF TAYLORISM EFNOB

As the hypothesis of this paper exists affinities were noted between the theory of Scientific Management and organizational structure of EFNOB. To understand the functioning of EFNOB, the Railway Annual Reports were analyzed with special attention to the spatial organization (layout) of the Central Office of Bauru Train Station, home of EFNOB. The research was limited to the period of time between the years 1917 (when the railway was named EFNOB) and 1939 (the year of inauguration of the Bauru Train Station).

The administrative organization of EFNOB was structured from four departments, called divisions, which were subdivided internally in sectors and subsectors.

First division

The First Division was directly subordinate to the Board. This department was composed by Supervisory Sectors, Secretary, Warehouse, Health and Accounting Service. The Federal Revenue Service, as its name indicates, supervised, watched, controlled all work carried out in other departments.

The Secretariat disclosed the guidelines developed by the Board and forwarded to all divisions, the secretariat also should receive all information from the departments and forward it.

The Warehouse bought all kinds of material needed for the functioning of all divisions, such as office supplies, building materials, material to make trains etc.

The Sanitary Service was in charge of the health centers, spread across the rail network and intended to serve the company's employees, with more two hospitals. The Accounting department performed statistical studies for all jobs and composed Accountability to consolidate the Annual Report of EFNOB, to be submitted to the Federal Government.

Second division

It was in charge of the Rail Traffic and Complaints. The Rail Traffic ruled the Telegraph, Vehicles, Transport and trains circulation, and the Complaints sector in charge to respond to calls from the railway customers.

Third Division

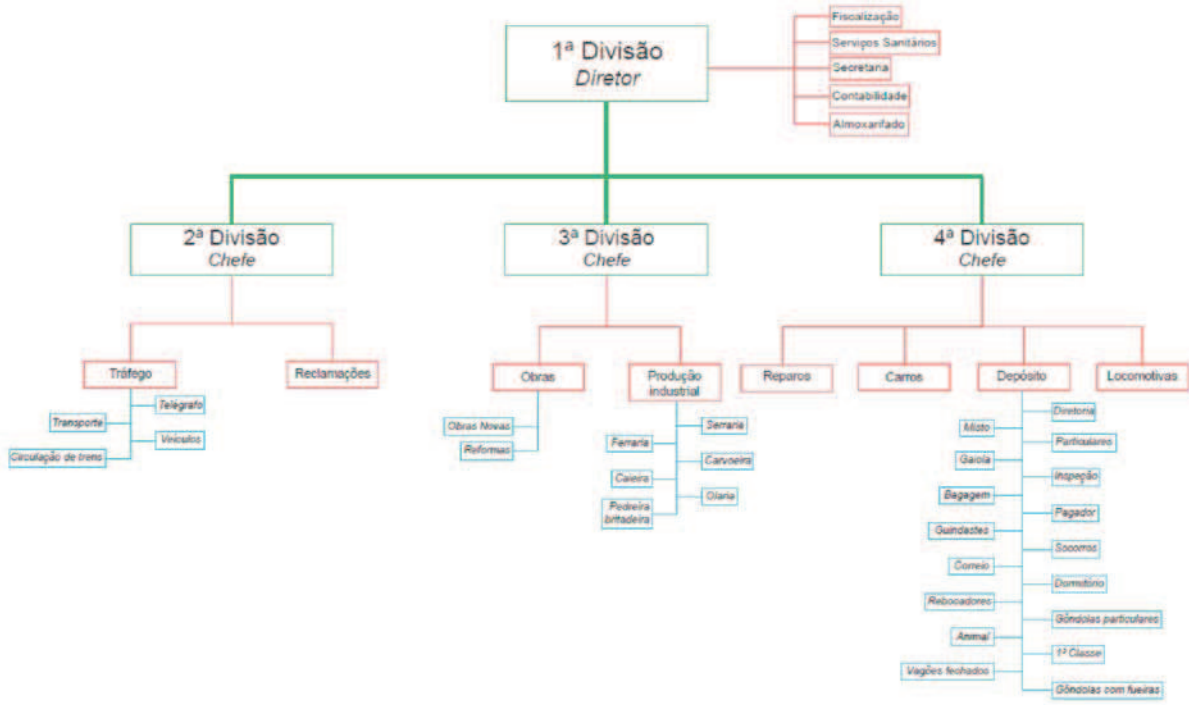
It was composed by Construction and Industrial Production sectors. The Construction Sector is subdivided in Reform and New Works, and the production, in Blacksmithing, Sawmill Pottery Caieira, quarry / crusher and Bunker.

Fourth Division

This department gathered the Locomotives sectors, Repairs, Deposits and Cars.

The chart expresses the division of work and also represents the hierarchical levels of command. At the departments there were managers, in the sectors there were sub-Managers and in the Sub-sectors, the Coordinators; below this, the operational staff. The flow of communications between these boxes of the organization chart follows the direction given by the line joining everyone, that is, an upward / downward linear flow. The Director of EFNOB was located in the First Division, highest position in the company hierarchy; above it, only the Minister of the Federal Government, and above this, the President of the Republic.

This administrative structure was not exclusive to EFNOB. Other railway companies in Brazil, such as the Paulista Company of Railroads have adopted techniques of the theory created by Taylor:



[...] This phase is the longest of them. Its characteristics are still being felt in the Paulista railway, but on the methodological criteria, it will be limited in the period covered from the end of last century until 1928, when they implemented the Companhia Paulista administrative reform aiming the introduction of a set of techniques developed by Rational Labor Organization (Frederick Taylor). (Segnini, 1982, p.16)

The Paulista Railway Company was built with National Coffee surplus capital.

In the central administration, 2.29% of the staff determined what the 97.7% remaining ones should do. The Paulista Railway Company in 1928 had 12.406 employees. In the system called divisional, which lies on the foundations of Taylor's Scientific Directions, the Company Paulista found the solution to problems related of this dominance, this was a whole new phase. The heads of administration in the Paulista Company should be the engineers.²

After the year 1917, EFNOB employees were divided into holders and Journeyman. Holders fit the positions of technical functions and direction, while the journeymen did the operational part. In 1920, according to the New Instructions, some changes have been promoted: Article 97 stated that "... all personnel, whether titled or hired, could be dismissed", although the same Article foresaw a special legislation for holders with more than 10 years of effective Federal Public Service; and Article 83 provided that typist, clerk and telegraphist, could be appointed without distinction, individuals of both sexes.

Initially, decisions were effective on the Office of the Railroad Itapura-Corumbá, in the city of Rio de Janeiro, the Federal District of Brazil at that time. The same railway was renamed Northwest Brazil in 1917. In that same year, the Central Office (Management and Accounting) moved permanently to the city of Bauru.

In 1936, Bauru Train Station started its operations³

" (...) this job was awarded the noble functions of the company: to form scientific and experimental bases, reports about the technical problems of a transport company, a bridge, a locomotive, a metallurgical manufacturing process rails, an installation of automatic signals, calculate the cost of transport, suggesting theories that conceive the company's needs and also the public one, meet the needs of production and trade, act with diplomacy, helping the administration in the study of labor problems. All these duties are inconsistent with the routine functions; these, pressing and absorbing things, always end up in the event of accumulation, destroying or diminishing the intellectual value of experts. (Segnini, 1982 p.60, 68, 75)

[...] During the year 1936 the works continued with natural intensity getting completed the reinforced concrete structure, the masonry and coverage. In 1936 they continued the collecting all the armed concrete structure, masonry and coverage. the building was set at the lowest spot of the city, because of that all the rainwater passed by in considerable volume, as the wall that closed the courtyard of the station had been demolished, It was therefore necessary to promote the diversion of the waters, which was made by building up a double underground gallery at Av. Rodrigues Alves and Rua Gerson France, which was protected by iron bars and served as docks. (Annual Report, 1936)

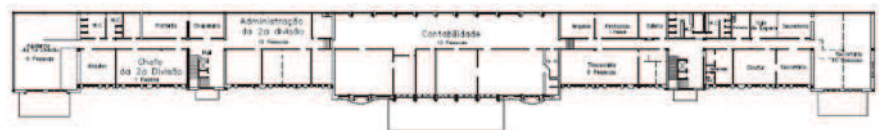
The majestic building housed the offices of EFNOB as well the boarding / unloading and storage services of Sorocabana and Paulista Railway Company. The large building in Art Deco style inspired by the model of the Brazilian

Central Station in the Federal Capitol, not only transforming the landscape of Bauru as well as defining an axis of development for the city [...] completed in 1939, Bauru station, Housed in a huge building, it fulfilled the purpose that determined their implementation, not only for the installation of two upper floors of all Head Offices of the administration of Northwest, on the ground floor, all traffic services and passenger services of Northwest and Paulista Railway and Sorocabana had authorization given by the Hon to operate on the same place. The President decreed in 1933, to February 12, 1940, was issued a contract between the three roads regulating the use in common Station and Bauru patio with a contribution of Sorocabana and Paulista. This contribution these roads gave free pass occupy the common part of the building and other easements for a period of 40 years, determined beforehand of time and calculated the compensation of benefits offered. (Annual Report, 1939).

Figure 04: Facade of NOB.
Design Pedro Hungria Cabral



Chart of the location of EFNOB in the new building.

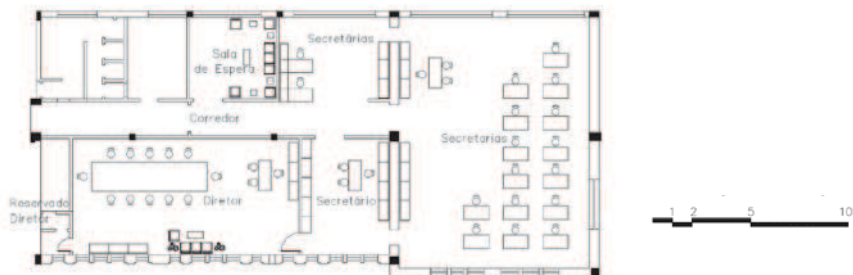


PRIMEIRO PAVIMENTO
Nordeste do Brasil - Bauru
Sem escola



SEGUNDO PAVIMENTO
Nordeste do Brasil - Bauru
Sem escola

Simulation of the First floor layout

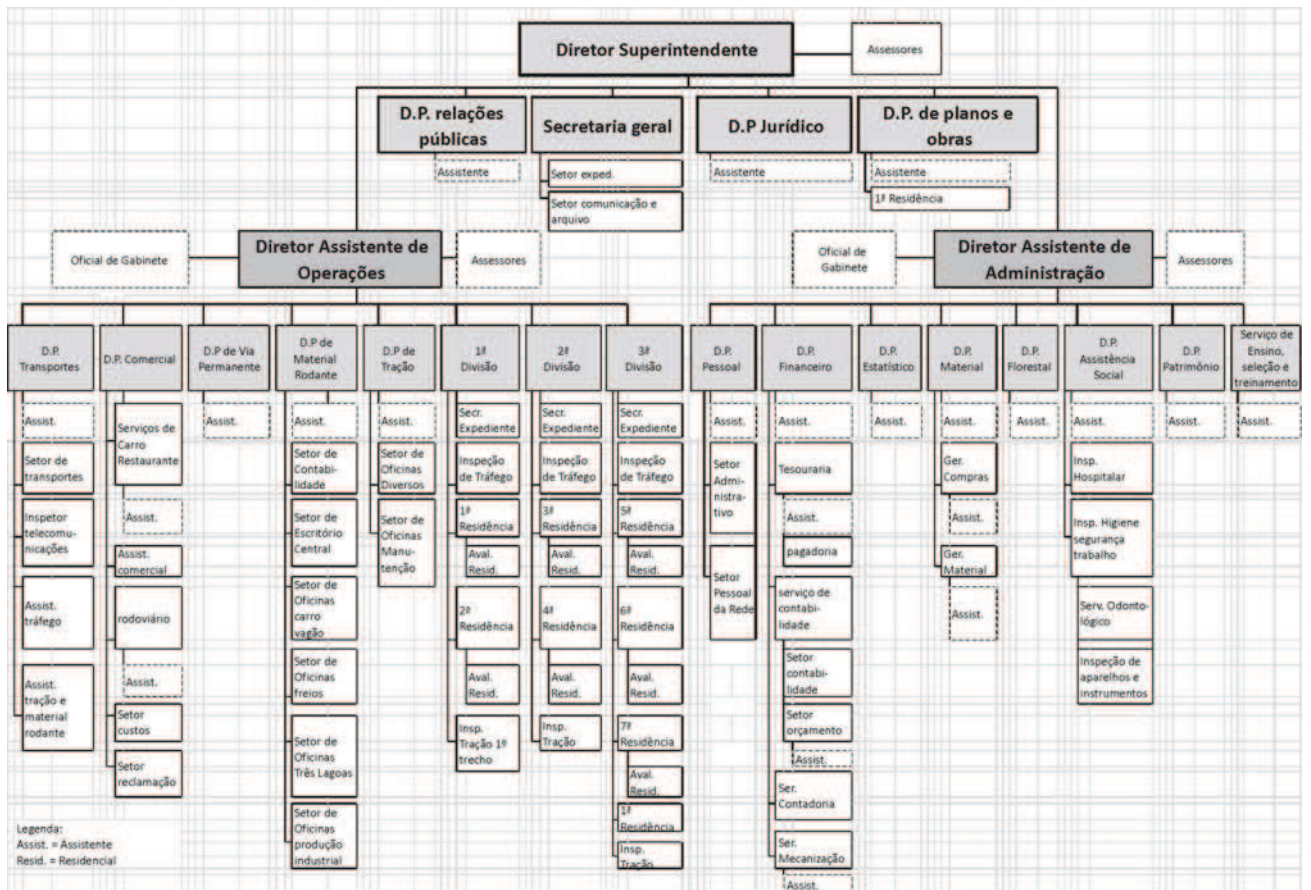


EFNOB moved its head office from a modest building to the luxurious building of the station, where the administrative organization adopted as reference the same organization chart and flowchart of 1917. On the first floor: the Board, the Secretariat, Treasury, Accounting and the Administration Division, the Head of Division and Assistant of the First Division. On the second floor, they set up the Head of the Third Division, the Administration of the Third Division, the Accounting Department, the accounting Books, Archives and the Sub manager .

In 1940, the administrative system EFNOB began to:

[...] In order to introduce new more efficient and rational working methods in road services contracted with a corporation Services to install a mechanical rigging suitable for statistical transport and execution of payroll services. We organized for this purpose the Department of Mechanization, directly linked to the Board. (Annual Report, 1940)

In 1957, with the creation of the Federal Railway (Law No. 3115 of March 16, 1957) are incorporated into EFNOB nearly two dozen public railway companies in Brazil. In 1969, the network is divided into four regional systems (EFNOB network is the Central South regional), which, in 1976, is divided into 10 Regional Superintendents. The organization chart of EFNOB, which was not the simplest one, became even more complicated and complex. Although we had already Taylorism in Brazil at the same time he was being gestated in



the United States this was not the first experience in hierarchical authoritarian administrations in the country, before that we already knew this type of management when the Portuguese royal family arrived Brazil.

BUREAUCRACY IN THE EMPIRE

The situation the Portuguese royal family arrived to Brazil was during the Industrial Revolution that changed the system of material production of society; however it was the French Revolution who spread the ideas of the period characterized as Enlightenment.⁴ These contagion revolutionary ideas invaded the economic and social atmosphere of all countries, demanding that their governments get conformed to Enlightenment values, even if it was just a scam, as it was the case in Brazil.⁵

With so many openings and the failure of the first liberal experiments, it seemed the most indispensable lucid resort to some despotic-illustrated formula, the most acceptable mode of republican dictatorship, until the public authority was consolidated against the enemies of independence and separatist. Without giving up formally of the modern political and institutional reference, the conservative leaders of the new countries had to adapt them as their concentration of power requirements facing the recalcitrant allies of the day before that, on behalf of a radical liberalism, opposed the restoration of a unified global order. (LYNCH, 2014, p.43)

It was in this context of revolutions that the independence of Brazil from Portugal that it was at that time ran by its own Bureaucratic logic design of a modern state.

The bureaucracy was even more pronounced to abort the bourgeois revolution in countries such as Portugal. It can be said that after 1385 the country has already constituted as a modern state under the rule of King John I, the bastard son of Peter I. (CARVALHO, 1980 p.29).

When the Portuguese royal family arrived in Brazil brought a conception of administrative order based on rationality of the well known bureaucracy. To Murilo de Carvalho, this bureaucracy consisted of political elite on the basis of ideological homogeneity. Unlike homogeneous class origin, it had its axle on studies. To participate, or to be a public official one must have university education. That's how the University of Coimbra specialized in forming bureaucrats to the Portuguese State. It was with the independence of Brazil that the Faculty of Law (in Pernambuco and Sao Paulo) replaced the visit of the Brazilian elite to Coimbra.

This bureaucracy was structured in a division of labor in the form of an organization chart and a flow chart. Internal to the organization chart was running a command hierarchy.

The Empire of the organization chart is as follows:

Bureaucracy Politics consists of a judiciary composed of judges; associate Judges; Ministers, Advisers; Presidents of Provinces; managers. By Ecclesiastical Power composed of Archbishops and Bishops. The Army Power composed of marshals and Brigadiers. The Marine Power composed of Admirals and Division Heads.

Bureaucracy directorial made by the judiciary: Municipal Judges and Prosecutors, directors, section heads; Officers. By Ecclesiastical Power composed of Canons, Monsignors and parish priests. The Marine Power consists of Captains, Captain 1st Lieutenants, and 1st Lieutenant.

Auxiliary bureaucracy composed of amauenses, continuous and practitioners.

Army power: 1st sergeants, forriel. Power in the Navy: 1st Sergeants, forrieis.

Workers bureaucracy made up of servants and workers. In the army: cables and the soldiers and the Power of Navy sailors and seamen.

The flowchart of this chart followed a chain of command guided by the linear flow in the descending order starting at Bureaucracy Policy (where decisions were made) going to the directorial Bureaucracy, Bureaucracy and Auxiliary Workers (who performed what Bureaucracy Policy defined).

Associated with bureaucracy there was a representation of body composed of the House of Representatives, Senate, a Council of State and the Moderator. Thus, there is a concept of modern state that was a Parliamentary Empire. However, that the Moderator (the Emperor) was the one who ultimately decided, parliamentary structure was a farce because, in the end the Emperor always took power from the members of the representative structure.

The decision-making power of the Emperor on the representative structure was within because of his privileges in policies.⁶

Brazil gained its independence, implemented a modern state, has integrated a new position in the international division of labor, and however kept the old colonial social division of labor based on agro export with slave labor.

FINAL CONSIDERATIONS

Management authoritarian policies based on the division of labor with the chain of command were part of the history of Brazilian administration since the Portuguese Royal Family arrived in the country. The categories of the Enlightenment period to spread the ideology of *science, reason, objectivity, universality* formed the conceptual foundation that “justified” exploitation of man by man policies. A rationalization of efforts occurred in both the public and private sectors; and it is interesting to remember that the *Rational Organization Institute of São Paulo Work* (IDORT) created in the 1930s was hired by the State Government to “taylorize” its structure.

The space of Taylor’s office is emblematic to understand the authoritarian administrations. However, Taylorism showed its weakness when the *formal organization* created by the organization chart and flow chart was neutralized by an *informal organization*. This informal organization proved who had the real power and is virtually impossible to locate it or to exterminate it; therefore occurred in the informal environment which Taylorism had no access. But it was also known that the proscribed work of

Taylorism depended on the employee's creative work as shown in the following thought:

Leo controlled his lathe slower than the manual said, but he put his shoulder and part of his weight on the stand tool holder to get a little more stability, put out his cigarette, and wore a 59 cents brush to apply a mixture of oil and kerosene made at home. The result was a perfect piece. (SALERNO, 1991)

If Leo followed the manual, the productivity of his work would have plummeted...

The command hierarchy lost control to the informal organization, which has given rise in place of Taylor's theory of *Human Relations* of Elton Mayo who proposed to dilute the chain of command within the organizational staff, that way he invaded the informal organization to control it. From this act, space *Panoramic Office* emerged. Unlike the Taylorism that targeted the extreme spaces separating the chain of command in isolated environments, this integrated to the spaces ordinary employees. The purpose was to create spatial arrangement for the employee to valorize the self-vigilance as in Bentham Panopticon⁷ said "one feels watched all the time, because the leadership is seeing".

Beyond the experiences of authoritarian administrations in their positions of power, there is today the monitorization of virtual spaces that coexists with the physical space, probably we are living a *neo-Taylorism* period...

NOTES

¹Taylorism shows that there was a much larger source of waste, whose cause was the anarchy of the means of production. Although the factory system had already introduced the separation between manual labor and intellectual work within the work process, the specific tasks of each worker were still left in his hands. The work was taught orally by the workers themselves to each other which meant that coexist numerous ways of doing the same task. Taylor will say that every task and every movement of every worker have a science, a knowledge to make professional, so they had to choose between the various solutions the best, the most rational way to run up an operation, therefore, the most profitable. Consequently, if there is a science for each type of work, the determinations of the tasks should not be left to the workers themselves attached to their tradition, but should be studied, classified and systematized by the scientists working in case the scientific management. It is then separate the phases of planning, design and direction on the one hand, the execution of tasks on the other. (RAGO, M. L. ; MOREIRA, E. What is Taylorism Sao Paulo: Brasiliense, 1984. p.19)

²2.29% of the staff determined what the 97.7% remaining should do. The Companhia Paulista in 1928, employed 12.406 rail. In the system called divisional, rested on the foundations of Taylor Scientific Management, found the Companhia Paulista the solution to the problems related to the dominance of its employees. The heads of administration in Companhia Paulista should be engineers. To this caste was awarded the noble functions of the company: to train in scientific and experimental bases, safe judgments about the technical problems of a transport company, a bridge, a locomotive, a metallurgical manufacturing process rails, an installation of automatic signals calculate the cost of transport, suggesting theories that conceive the company's needs and the public, meet the needs of production and trade, act with diplomacy, helping the administration in the study of labor problems. All these duties are inconsistent with the routine functions; these, pressing and absorbing, always end in case of accumulation, destroying or diminishing the intellectual value of the experts (Segnini, L.R.P. Railway and Railway St. Paul:.. Cortez, 1982 p.60,68)

³ [...] During the year 1936 continued the works with natural intensity getting finished the reinforced concrete structure, filling walls and roof. In 1936 they continued the works by collecting all the armed concrete structure, masonry and coverage. Set in the building at the lowest point of the city, he made ??their way rainwater in considerable volume, as has already demolished the wall that enclosed the courtyard of the station. It was therefore necessary to promote the diversion of the waters, which was made by building up a double underground gallery at Av. Rodrigues Alves and Rua Gerson France, served by Wolf docks protected by iron bars. (Annual Report 1936)

⁴ It is significant that the two main centers of this ideology were also the double revolution, France and England; although in fact the Enlightenment ideas gaining a wide current international voice in its French formulations, a secular, rationalist and progressive individualism dominated the thinking "enlightened". Freeing the individual from the shackles that agrilhoavam was his main goal: the ignorant traditionalism of the Middle Ages, which still cast its shadow over the world, superstition of Churches (other than "rational" or "natural" religion), the irrationality that divided men in a lower hierarchy patents and higher according to the irrelevant birth or some other criterion. Freedom, equality and brotherhood of all men were his slogans. In due course become a slogan of the French Revolution as well." (Hobsbawm, p. 48)

⁵ Few times the inability of governments to contain the course of history was demonstrated more decisively than in the post 1815 generation Avoiding a second French Revolution, or even worse catastrophe of a European Revolution. Even the British who did not sympathize with absolutism, knew very well that the reforms could not be avoided and feared a new Franco-Jacobin expansion more than any other international contingency. And yet, never in the history of Europe and rarely anywhere else, the revolutionary spirit was so endemic, so general, so able to spread by deliberate propaganda as by spontaneous contagion. ... The Spanish revolution revived the liberation movement in Latin America. The three great liberators of Spanish America, Simon Bolivar, San Martin and Bernardo O'Higgins, established the independence respectively the "Gran Colombia" (which included the present republics of Colombia, Venezuela and Ecuador), Argentina (except areas inland today are Paraguay and Bolivia and the pampas beyond the Rio de la Plata, where the gauchos of the Eastern Band - today _ Uruguay fought against Argentine and Brazilian) and Chile. By 1922 Spanish America was free. Meanwhile, Iturbide, the Spanish general sent to fight against peasant guerrillas who were still resisting in Mexico, he sided with the guerrillas under the impact of the Spanish revolution and in 1821 established the Mexican independence. In 1822, Brazil broke away peacefully from Portugal under the conductor's command left by the Portuguese Royal Family in his return to Europe after the Napoleonic exile." (Hobsbawm, p. 181)

⁶ The constitutional monarch, besides being the head of the executive branch, he counts the august character of defender of the nation: it is your first vigilant authority, guardian of our rights and the Constitution. Here, then, the direction that Brazilian conservatives follow the period: to reconcile the strong government with constitutional and representative formulas guarantee under the oligarchic forms a monarchic essence. Although the art. II of the Charter Imperial declare that both the prince as the meeting were representatives of national sovereignty, art. 98 proclaimed the primacy of the first as the first representative of the Nation, for her responsible for ensuring constantly the balance of political powers. (...) That is, although both were the nation's delegates, the representation exercised by the emperor was earlier and higher than exerted by the assembly" (Lynch C. From monarchy to oligarchy. P.50)

⁷ "Bentham's Panopticon is the architectural figure of this composition. We know the principle on which it was based: at the periphery na anular building; at the centre, a tower is pierced with wide windows that open onto the inner side of the ring; the peripheral building is divided into cells, each of which extends the whole width of the building; they have two windows, one on the inside, corresponding to the windows of the tower; the other on the outside, allows the light to cross the cell from one end to the other. All that is needed, then, is top lace a supervisor in a central tower ant to shut up in each cell a madman, a patient, a condemned man, a worker or a schoolboy. (...) Visibility is a trap." (Foucault M. Discipline and punish the birth of prison. Londres: Clays Ltd. 1977, p.200)

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