dità, molteplici aspetti della realtà tra cui piante e fiori, conferendo dignità artistica a singoli particolari resi con stupenda finezza descrittiva.

Mossa invece dall'attenzione scientifica, dalla ricerca di registrare la corporeità dell'oggetto e nel contempo rivelarne la sua idealità, fu l'attività di Leonardo, uomo "senza lettere", diffidente della speculazione filosofica, poliedrico e solitario genio, che studiò dal vero la natura producendo splendidi disegni di botanica oltre che di anatomia. Nei suoi dipinti l'elemento vegetale, perfettamente conformato alla realtà, è armonicamente integrato nell'impianto compositivo al fine di rendere evidente quell'equilibrio tra l'uomo e la natura volutamente perseguito dall'artista.

THE MAKING OF SPANISH PUBLIC HEALTH ADMINISTRATION DURING THE FIRST THIRD OF THE TWENTIETH CENTURY

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ABSTRACT

An overview of the forming of the modern Health Administration in Spain is intended, trying to relate proposals with day to day realities. Starting with the dissection of elements that suggested the sanitary backwardness of Spain to contemporary observers, this paper traces the actual program to modernization in public health services through the analysis of the political action led by an élite *of doctors and public health administrators, who happened to be at the same time relevant political figures of the dynastic parties, the legal framework of reform (the General Decree of Health, 1904) and the institutional changes in the provisions for public health surveillance; these are labelled "from the Health Boards to the Institutes of Hygiene", symbolizing the moving away from a traditional, pluricomposed and political instance, the Health Board, where experts performed just as advisers, to a new, scientifc based and professionally managed institution which, under the Second Republic, extended its benefits to the rural population. The lack of practical effects of these public health reforms led us to conclude that they were suggested more to extend professional areas of competence as well as part of conciliatory policies regarding the "social question".*

Introduction

The twentieth century is characterized as a period that has seen Spain's definitive demographic modernization, as reflectedby decreased absolute mortality, decreased infant mortality, fewer deaths due to infectious diseases, increased life expectancy, decreased birth rate, and aging of the population. These phenomena have been accompanied by distribution of the active population preponderantly in industry and services, and location of the population mainly to urban areas. Although this process became markedly accelerated in the fifties, its origincan be traced to the first third of this century, as it has been shown (1) Those were the years that witnessed the making of a modern administration of Public Health in Spain.

The following overview begins by reviewing the factors that motivated reform, namely, the perception of Spain's backwardnessin public sanitation and health, and goes on to describe the evolution of administrative reforms in public health care, and the extension of its benefits from urban to rural areas.

I. *A perception of decay: sanitary backwardness in Spain*

At the end of the nineteenth century, Spain was in the midst of a deep economic, political and social crisis. Its defeat by the United States in 1898, meant the loss of the last overseas colonies of the Spanish Monarchy, Cuba, Puerto Rico and The Philippines. This affront crystallized the unrest in many social strata throughout the nation. As Tuñon de Lara has noted, Spain entered the twentieth century without having completed a number of the proposals originally put forth in the preceding century. The generic term "regenerationism" (2) was coined to refer to attempts to modernize all facets of social life and governmental activity. The program for modernization consisted of adapting trends and structures employed in other countries considered "civilized", i.e. those in western Europe, to the Spanish condition.

Not surprisingly, these aspirations included significant attempts to improve health matters, since comparisons with other countries had revealed the extent of the deficiencies in Spain: wholly inadequate water supplies and sewers in cities, the lack of organized services to compile health statistics and higher overall mortality rates, as a result, to a considerable extent, of widespread infectious-contagious diseases.

Health conditions in Spanish urban areas left much to bedesired (3). Barcelona, one of the two largest cities, undertook to completely overhaul its sanitary facilities between 1885 and 1893, although the insufficient number of connections to dwellings required the construction, in 1913, of a large number of water tanks to maintain circulation through the sanitation system (4). Madrid began to extend its sewer system after the cholera epidemic of 1885 (5). In Seville, the grave conflict between the League of Property Owners and the City Council came close to halting construction of the new sewer system in the heart of the Old City in 1901 (6). In 1913, an enquiry made by Philipp Hauser (1832-1925) (7) among Provincial Health Inspectors showed that "the great majority of (provincial) capitals are lacking in sanitary infrastructure necessary for the health of the people". In particular, among the seven largest cities (population > 100.000), only Zaragoza and Seville possessed vast, modern sanitation systems, although water supply in both cities was insufficient. In three other cities, Madrid, Valencia and Malaga, a fair water supply was not matched by a good sewer system, while in Barcelona and Murcia, both aspects were altogether deficient. Several years later other reflections on the "sanitation problem in Spain" still emphasized the general scarcity of potable water conduits, the insufficient street cleaning services, and the

severe inadequacies of the sewer systems (8). According to such data, one third of the cities in Spain had no water supply, and the situation in provincial capitals was far from satisfactory.

In rural areas, it seems clear that with the exception of some specific places, the main problem was not the water supply in itself, but rather transport and protection from contamination. The *Avances de los Inventarios ... de aguas potables* from the 1918 Rural Health Inspection, the only study on the topic that was concluded and published, reports that of the 9 261 incorporated townships in Spain, including the Balearic and Canary Islands, only 50 had no water supply, although the existing ones were insufficient in nearly one fourth of all towns. Water was supplied by 14 060 springs, 70% of which were shown on hygrometric (but not bacteriological) analysis to be potable. 27% of the sources were manifestly lacking in sanitary safeguards or where otherwise unhealthy, and a further 38% were suspected of being inadequately protected.

This situation existed despite a Royal Decree of 1914 that established the principle of state aid to towns to help finance water supply works; clearly, the amounts stipulated were minuscule. During the first year the decree was in effect, 750.000 pesetas (out of a total annual budget of 1.468 million pesetas) were spent on such projects; this amount remained unchanged until 1918 (9). In 1912 and 1920, the conditions that drinking water had to fulfil to be considered potable were set down. In 1920, a Royal Decree dated May 11 created the Central Sanitary Commission, responsible for all matters relating to the water supply and sanitation facilities of towns with more than 10.000 inhabitants. Although the effectiveness of this commissionis impossible to judge, given the lack of pertinent local studies, the 25% decrease in the death rate due to typhoid fever (10) appears to support the hypothesis that efforts to improve sanitation became more common.

However, in 1922 it was reported that Cordoba, like other large cities in Andalusia, had no sewer system. This fact, together with the repeated decrees in November 1922 and June 1925 that called for the same measures as those set down in 1920, suggest that the success of the Central Sanitary Commission was only partial, and was strongly influenced by local circumstances. There were a number of attempts to systematically compile health statistics (11), "[...] an indispensable and necessaryservice that is currently organized in all cultured countries [...]" (12). Two different approaches were tried: through the Geographical and Statistical Institute (born from the Civil Registers in operation since 1871), and through the medical hierarchy. Through the latter, after many attempts, the only result from 1929 on was an obligatory weekly report ofinfectious-contagious diseases. The demographic approach became more firmly based in 1899, when the abbreviated nomenclature of Bertillon was adopted. Thereafter, the Geographical and Statistical Institute regularly produced an annual report, *Natural movement of the population*, during the twentieth century. These data greatly facilitated comparative analyses of mortality.

Mortality rates in Spain during the first decade of the twentieth century were described as "truly shameful" in comparison with those of the "principal" European countries. The Inspector General of Health considered it then shocking that despite its high birth rate, Spain would need 436 years to double its population, as opposed to only 133 years for Germany, 166 year for England, and 284 for Italy. He noted that human resources are "the true basis of a country's prosperity and growth" (13). In 1918, another high public health officer, Francisco Murillo Palacios, expressed similar concerns:

> "Aside from Russia, the mortality rate in Spain is the highest of all cultured countries, and for the race, this useless sacrifice of lives signifies a rampant hemorrhage leading to degeneration, and for the country, a foolish waste of native capital, the primary cause of our economic and political decadence" (14).

In 1931, such statements were still something of a cliché in medico-social publications.

Moreover, the high mortality due to infectious diseases was interpreted as proof of the extent of the public health problem, and of Spain's relative backwardness. Angel Pulido, General Director of Health in 1902, noted that the situation represented "a real disaster and a tremendous dishonor", typical of "a neglected, defenseless people" (15). These opinions were repeated by the winner of the special competition on "the public health problem in Spain, "sponsored by the Civil Engineers' Institute in 1919:

> "[...] that is, Spain commits the greatest of all cultural crimes conceivable for a nation: that of being incapable of preserving the life of its citizens... who might be rescued from death if only the nation could be sanitized to some degree..." (16).

At a time when medical opinion considereôd transmissible diseases as "preventable diseases", it is not surprising that their high prevalence was blamed on the "backwardness of our health administration", and that this should be wielded as a pressing argument in favor of the adoption of a clear-cut policy toward the awaited "health regeneration" (17).

Comparisons with neighboring European countries were clearly unfavorable, as shown by Murillo in 1918 (18), who cited data from the five year period from 1906 to 1910. These figure revealed proportionately more cases of typhoid fever in Spain than in Italy, three times as many as in France, and four times as many as in Germany or England, in addition to twice as many cases of puerperal septicemia and "a horrifyingly greater number" of smallpox than in the country he next highest rates (19).

The economic dimensions of these observations became all the more obvious when a monetary value was assigned to each human life, a practice with

illustrious antecedents in other European countries during the nineteenth century. Indeed,' an official of the Spanish Society of Hygiene blamed doctors'lack of familiarity with "mathematics and numbers" for the medical profession's delay in demanding action; when loss of life was translated into days of work lost, decrease inproduction, police work and welfare organization expenses, the excessive mortality rate was seen as "the greatest squandering of the national economy" (20). At a current mean value of 5.000 pesetas per human life, the loss to the national economy during the first decade of the twentieth century was calculated at the astronomical figure of 5.000 million pesetas.

The benefits to the national economy of investing in sanitation, not only in terms of lives saved, were constantly brought up in publications and oral reports. Some underlined the benefits that urban sanitation would have for tourism (21).

II. *The program to modernize public health in Spain. A new health administration*

2.1. A starting point: The restoration of the General Directorate of Health

In the summer of 1899, the conservative government reestablished the General Directorate of Health as a branch of the Ministry of the Interior, in order to cope with the threat of bubonic plague, which had broken out in Porto, Portugal. The director, Carlos María Cortezo (22), was a prestigious doctor and owner of one of the most influential professional weekly publications, *El Siglo Médico*.

This branch of the Department of the Interior had no further knowledge of the sanitary situation in Spain other than that provided by its special envoys (two border Health Inspectors named by Dr. Cortezo), reports from provincial authorities (civil governors), and the information gathered bythe few Provincial Health Inspectors that had been already named in 1892, who were neither paid nor supplied with the slightest technical or administrative support (23). In practice, these inspectors were reduced to implementing the directives of the special local Hygiene Services, which charged them to perform medical exams of prostitutes (24).

As the central organ, the General Directorate of Health was responsible for the Institute of Vaccination (founded in 1871) and the Laboratory of Bacteriology and Hygiene (1894), which were combined under the name (1899) of the Alphonse XIII Institute of Serotherapy, Vaccination and Bacteriology, later National Institute of Hygiene (1914). Its first director (1900-1920) was Santiago Ramón y Cajal (1852-1934), a national scientific hero who was about to win the Nobel Prize of Physiology and Medicine (1906). Until the opening of the National School of Public Health in 1931, this organ provided specialized technical training, particularly in bacteriology and disinfection.

Although Cortezo had achieved hopeful results, he was relieved of his post after four and a half months upon the downfall of the minister who named him. However, the period from December 1902 to January 1904, when he once again held the same office, proved to be decisive for the preparation of legislation that was to be the cornerstone of the new administration: the General Public Health Decree, enacted in January 1904.

The highest level organ of Spanish health administration was paradoxically eliminated by the new legislation, and was replaced with two General Inspectorates until 1922, when it was restored. The reappearance of the General Directorate of Health can be considered a by-product of the intense campaign launched in 1918 by the most influential voices in health administration and medical practice, in favor of the formation of a Ministry of Health (25).

During the Spanish Republic, two Subsecretariats of Health and Welfare were created, to the detriment of the General Directorates, which they temporarily replaced. The General Directorates were passed back and forth between the Ministry of the Interior and the Ministry of Labor. The area of Health was eventually appended to the Ministry of Labor and Social Insurances 1934, transiently designated the Ministry of Justice, Labor and Health for a brief period from the end of 1935 to the beginning of 1936. The melding of Labor and Health had been advocated on ideological grounds in 1920 and 1921 by Senator Van Baumberghen through two similar proposals presented before Parliament and in 1921 by Manuel Martín Salazar (1854-1936), then General Inspector of Health (26). During the Civil War, the Republican government established a separate Ministry of Health.

2.2. The legal framework of reform: The General Decree of Health (1904)

The General Decree of Public Health updated the old precepts of the Health Law of 1855, in which the dominant tone was fear of importing "exotic plagues" (bubonic plague, cholera, and yellow fever) (27). The new General Decree remained in effect until 1944, when the Ground Law (*Ley de Bases*) of National Health was approved. Thus, without actually attaining the status of law, the Decree provided an effective framework for the subsequent development of projects aimed at modernizing public health care.

The public health administration was divided into three main components: the executive branch, the consultative branch, and the inspectorate. The first was connected to the Ministry of the Interior, and was under the control of civilauthorities. The consultative branch, patterned on models from the previous century, was administered at state, provincial and local levels by the Royal Council of Health and the provincial and municipal Health Boards. These Boards were responsible for setting up Laboratories of Hygiene and Institutes of Vaccination, which already existed in a few cities, eg, Madrid, Barcelona and San Sebastian. Finally, the Decree created a new body of public employees, the General,

Provincial or Municipal Health Inspectors, whose job it was to ensure adequate practices of public hygiene, and to technically uphold the mandates of the Health Boards, although they had no direct executive powers other than those delegated to them expressly by the responsible official. It was assumed that as specialists, the Inspectors would take over the direction of newly created Laboratories of Hygiene and Institutes of Vaccination, although this was not obligatory. In addition to these functions, the Decree regulated the activity of local governments in providing health care to the poor.

At the level of the central administration, the 1904 Decree, as I have shortly said, replaced the General Directorate of Health with two General Inspectorates: Border Health and Interior Health. The General Inspectorate of Border Health had its own staff and infrastructure, and was responsible for "port services and border health stations "that had been set up during the previous century on the basis of traditional models, and which were regulated by the Health Law of 1855. These health stations, however, were increased in number and dignified as a result of the International Health Agreement signed on occasion of the 1903 Paris Conference, from 1909 on (Regulation of Border Health, January 14, 1909). The General Inspectorate of Interior Health was responsible for all other areas of public health.

The two General Inspectorates were combined into a single one by the Royal Decree of May 31, 1916, which in turn was subsequently transformed into the General Directorate of Health in February 1922.

During the first third of the twentieth century, the armed forces also had their own health administration within the Army and the Navy; in addition, there also existed for nearly a decade a General Inspectorate of Rural Health within the Ministry of Development. This body, created at the end of 1910 to deal with human and animal health, was structured in regional levels with eleven Inspectors. In 1917, it prepared questionnaires to survey the incidence of ankylostomiasis, trachoma, and other ophthalmias, and in 1918, its "inventories" on malaria and potable water marked the de facto commencement of the fight against malaria (28). This separate health body was eliminated by a decree of October 23, 1918, although in an example of ministerial mismanagement, its functions were not taken over by the Health Service of the Ministry of the Interior until February 11 of the following year (29).

The period from 1917 to 1920 was characterized by the intense publicity given to health problems, against a background of increasing social unrest. The journal *La Medicina Social Española* ("Spanish Social Medicine") was published in Madrid during this time as the official organ of the Spanish Hygiene Society, Provincial Health Inspectors and Border Health Inspectors. It openly admitted that its goals went beyond publicizing the calls for health reform; what it sought was to obtain funds to finance a "Spanish Company of Medico-Social Institutions", designed by the conservative minister La Cierva (30). Whereas in 1917-1918 the most urgent topic for public discussion was Compulsory Health Insurance (31)

following the severe flu epidemic of the spring and autumn of 1918, this gave way to concerns over the prevention of infectious diseases and the creation of a Ministry of Health. Against this background, a number of attempts were made to pass a new Health Law. In March 1918, under a Conservative cabinet, a law was passed concerning the prophylaxis of venereal diseases; later on, during Liberal Dr. Amalio Gimeno's (1850-1936) tenure as Minister of the Interior (32), a bill that proposed a series of "health reorganization" measures was presented, but not passed; the Inspectorate of Rural Health was brought under the wing of the Ministry of the Interior; and a Royal Decree of January 10, 1919, regarding the "prevention of infectious diseases", regulated the obligatory reporting of some contagious diseases (33) at the same time that a Permanent Board against Venereal Diseases was erected (Royal Order of December 8, 1919). Several months later, at the behest of Burgos Mazo, the new minister, the abandoned Health bill was rewritten under the advice of a commission composed of prestigious health professionals, representative of the dynastic parties (34), with no success. Again in 1922, the proposed law was to remain blocked by parliament, while *Don Quixote* was slowly read from the speaker's tribune, in a typical display of filibustering (35).

The main impediment to agreement was the economic dimension of these projects. As pointed out in an official Navy publication of 1912, "hygiene is expensive", and even more money would be needed for "the job of the physiological regeneration of the race" (Royal Decree of January 10, 1919). There was little chance of reaching agreement on emergency spending, the national budget already being burdened with the costs of the military campaign in Morocco, initiated in 1913. In 1916, of a total government expenditure of more than 1.460 million pesetas, 2.5 million were earmarked for the Health Inspectorate; as a result of the aforementioned agitation campaign, this figure rose to 3.5 million in 1919. However, in 1920, despite growing inflation, the Ministry of the Interior reduced the portion of the budget allotted to Health to 2.6 million pesetas (36).

2.3. From the Health Boards to the Institutes of Hygiene

The General Decree of Health modified the structure of public health administration by incorporating the new corps of Provincial Health Inspectors into the traditional Health Boards (37) as Secretaries. The hybrid technical-political nature of the Boards, which had prevented them from performing any sort of meaningful work in the long term, except in moments of crisis such as the cholera epidemics of the nineteenth century, was ameliorated with the new system: the Secretary acted in practice as a safeguard of continuity and a guarantor of the of sanitary control and inspection. For the first time in Spanish health legislation, ordinary public health was a matter of higher priority than external threats.

The responsibilities of the new Inspectors were, at least in theory, to detect cases of infectious-contagious disease, and to prevent them, to oversee conditions of urban hygiene, to inspect foods, and to ensure that vaccinations were carried out, in addition to maintaining and compiling health statistics (38).

However, their actual performance in the discharge of their responsibilities was disappointing. Few provincial inspectors were appointed, and those few who were named often requested leave. By 1915, the number of vacant posts was alarming. To solve both problems, it was decided that candidates who passed the civil service examination could not apply for leave as long as any post remained vacant. During the first 15 years since the posts were created, their duties included the original responsibility of performing medical examinations of prostitutes (cfr. footnote 24 above), in addition to serving as Secretaries of the Provincial Health Boards. Despite these duties, their salary was considered grossly insufficient, and the Inspectors themselves had to cover office expenses out of their own pocket. When the Royal Decree of December 15, 1917, provided for a reimbursement of 750 pesetas to cover office expenses, the Provincial Councils that actually paid this amount were few (39).

The limited responsibilities of the post immediately caused discontent among the Inspectors, as expressed in the conclusions of the First National Assembly of Health Inspectors, held in November 1916 (40). Their demands were reinforced by their experiences during the flu epidemics of 1918 and 1919. At that time it was complained that the local administrations were "incapable of doing anything about health" (41), a claim which did much to foment public opinion in favor of the creation of a Ministry of Health, staffed by health professionals or doctors.

Many of the demands of the First National Assembly were met during the following decade. On August 26, 1920, the second set of regulations of the inspectors' corps was approved; according to these bylaws, the functions of the Provincial Inspectors were clearly connected with epidemiological tasks, including the prevention and treatment of outbreaks of transmissible diseases, the compilation and reporting of health statistics, and the carrying out of research, all in addition to their original function of providing medical care to prostitutes.

Another demand soon satisfied was the creation of Health Brigades, mobile teams designed to combat epidemics. Under the guidance of the General Inspectorate, the Central Health Brigade was established, consisting of four doctors, a nurse, two mechanics and three "disinfectors" authorized to handle a wide range of disinfectants, a portable water purification system, equipment for the administration of sera and vaccinations, and a portable microbiological laboratory. Provincial Brigades were also established, to be financed by the mancommunities formed of different towns and administered by *ad hoc* boards whose members were to be drawn from among civil authorities, functionaires and technicians.

The Provincial Health Regulations of October 20, 1925, called for the fusion of all provincial health organisms (Health Brigades, Laboratories of Hygiene and

Institutes of Vaccination, regardless of whether they were created after the 1904 Health Decree in all cities with a population greater than 15.000, or whether they were established by earlier municipal decision) into a single Institute of Hygiene, under the technical and administrative control of the Provincial Inspector. Large cities in which specialized laboratories had already been in existence for many years were exempt from this bureaucratic concentration of means and functions (42). The new organism was responsible for epidemiological work and disinfection, clinical, hygienic and chemical analyses, vaccinations, public service information on health issues and statistics, and teaching. This innovation gave provincial public health officers real responsibilities, and then integrated them into a hierarchical system firmly centered inthe capital by the next Republican administration.

The 1904 Decree of Health also spoke of Municipal Health Inspectors, to be named in each town, in proportion to the number of inhabitants. These posts were to be filled by Titular Doctors, physicians from the local Welfare Corps, or Medical Subdelegates, depending on the local circumstances. Their job was to oversee local sanitary conditions, and to help prevent epidemics, epizootics and infectious diseases in general.

It is doubtful whether these Municipal Inspectors played any significant role before the 1930's. Highly qualified officials, such as the General Inspector of Health, stated ten years after the promulgation of the new Decree that "such inspection does not currently exist in Spain" (43). The main reason for this ineffectiveness was lack of adequate funding.

In large cities with more democratic governments, such as Madrid, Barcelona, and Valencia, the city councils had been providing disinfection services, chemical laboratories (for the analysis of water and foods), and microbiological laboratories since the end of the previous century (44). These hitherto separate services were combined under the name of Urban Institutes of Hygiene. For example, in Barcelona, this institute originally started with the micrographic laboratory, founded in 1864, and the disinfection service and microbiological laboratory, in operation since 1885. The reforms of 1891, triggered by an outbreak of epidemic flu (45), led to the combining of the above mentioned services into the Municipal Institute of Hygiene. In cities such as Barcelona, the Municipal Inspectors added little to efforts to improve public health, however, it should be recalled that despite the requirements set forth by the law, very few cities ever organized these laboratory services at all.

The conclusions of the National Assembly of Municipal Chemists and Bacteriologists held in Madrid in 1924 strongly support that view. The principal demand of this group of professionals was that the City Councils, especially those of the larger cities, fulfil their legal obligations in sanitary matters, including those stipulated in the Municipal Statute of March 8, 1924. The Assembly published the following disheartening view:

> "[...] in some provincial capitals the Municipal Laboratory is nonexistent; ... in others, it was placed in the hands of the corresponding brigade; ... in a good number, there is no financial support to maintain these services; ... in some cases, salaries are not even paid [...]" (46).

According to the Municipal Health Regulations of February 1925, there should be as many Inspectors as there were titular doctors and at least as many as the number of urban districts in cities with a population greater than 100.000 inhabitants. The Regulations gave Inspectors specific rights, autonomy from local governments (through the creation of the Corps of Municipal Health Inspectors who were hired on the basis of nationwide civil service exams), and some powers of enforcement to attempt to put the new laws in effect. In addition, there were to be created "municipal offices of hygiene", modeled on the municipal institutes described earlier. The central tasks of the new Corps continued to be of the nature of a medical police, and included the administration of obligatory vaccinations and the compilation of local morbidity and mortality statistics. Nevertheless, the practical repercussions of the Regulations were scarcely felt, and by 1934 only "a handful" (47) of municipal hygiene offices had been set up.

III. *Health campaigns, from citis to country*

To the centuries long concern over urban sanitary conditions, the twentieth century added to public health policy a further aspect of medical intervention in the form of much more incisive programs aimed at the healthy (but at risk) population, with an explicit component of mass education: this newer vision was known as Social Medicine.

Apart from administrative reorganization, the commitment to public health in Spain was also manifested with the organization of different campaigns, or "fights". Some of these campaigns (eg, the vaccination campaigns and the fight against venereal diseases) were connected with the new health organisms, particularly the Municipal Institutes of Hygiene in larger cities, and the Provincial Health Inspectorates. Other campaigns, such as the fight against malaria, were administered from the start by the central government, through separate offices which were, until the inception of the Republic, removed from the regular health administration. Finally, those campaigns aimed at combating infant mortality and tuberculosis were run by private philanthropic institutions, albeit with collaboration and protection from different levels of state and local government. It is not within the scope of this paper to give a detailed description of each one of these campaigns (48); nevertheless, it's worth to emphasize their common traits (49). These discontinuous, city-based campaigns fomented the appearance of new medical specialists (phthisologists and puericulturists), and new health professionals (health visitors, auxiliary puericulturists), as well as they inaugurated new location for health care activities, such as the "Health Centers" (*Dispensarios, Consultorios,*

Centros de Higiene). Its dynamics were also characteristically more aggressive than any previous others, based as it were on the concept of risk, which extended to whole populations - who were sought for its scope for screening, and pervaded of an extreme vocation of educational guidance.

During the Republic, these semiprivate structures were incorporated into the public health system, and made available to the rural population.

The policies set in motion by the provisional Republican government (1931) were aimed at unifying health administration, implanting social insurance benefits for illnesses, and extending the "scientific principles of health" to rural inhabitants, who made up most of Spain's population. To achieve this last goal, government action was based on the guidelines established by the Health Committee of the Society of Nations (Budapest Meeting, October 1930) and the European Conference of Rural Hygiene, convoked at the request of Spain and held in Geneva in June and July of 1931 (50).

At this conference a three-level system of Health Centers, providing primary, secondary and tertiary care, was proposed. The tertiary level was to be represented by the Provincial Institutes of Health. The 16 secondary or district centers in operation in December 1932 had increased to 46 by February 1936, when they were turned over to specialists of the National Health Administration. These centers provided specialized care in the following areas: obstetric care, puericulture, school hygiene, odontology, ophthalmology, otorhinolaryngology, diagnosis of tuberculosis, venereology, laboratory analyses and x-rays. When appropriate specialists were not available locally, they were transported from the nearest capital to see patients (51).

Primary centers were run under the supervision of secondary centers, but their day-to-day operation was in the hands of Titular Doctors (medical doctors hired by municipalities to provide health care to the lower rangs of population) aided by local midwives and nurses, and by the Public Health Nurse. In the province of Cáceres, which had one oof the highest mortality rates in Spain during the beginning of the twentieth century, and where more than 70% of the population lived in towns of fewer than 10.000 inhabitants, technical advice and funding from the Rockefeller Foundation helped start a well-organized Provincial Health Institute (tertiary center), which offered training courses for Titular Doctors, who were thereafter to organize primary centers. During the first year of the program, 23 similar centers opened their doors, and devoted most of their efforts to the anti-malaria campaign (52).

During the brief period of Republican government, the innovations in preventive medicine were not enthusiastically received by rural physicians. In 1934, some sources described the work of Titular Doctors in preventive medicine as "faltering" (53). The degree to which rural doctors, who up to then had usually been the only medical authorities practicing in a given district, considered competition with the specialized staff of the rural public health centers a threat to their livelihood, cannot be judged. Their complaints, inthe words of the Titular

Physician of Peñaflor de Hornija (province of Valladolid), centered on competition against their private practices:

> "[...] the Secondary Centers also arrived to provide curative medicine; that is, to steal patients from among [...] the clientele of unsuspecting Spanish physicians [...]" (54).

This situation was also reflected in other statements bypublic health officers:

> "[...] the clinicians do not refer their patients to the Health Centers [...] on the entirely justifiable fear that their incomes will shrink [...]" (55).

In 1936 the functions, staffing and objectives of the Rural Health Centers underwent a complete overhaul by an Order of the Ministry of Labor, Justice and Health of February 12 ("Gaceta" February 13, 1936). This was motivated, in part, by the realization that these centers had become an "indispensable element" in the public health system, which were subsequently to form the basis of attempts to coordinate the necessary components of what was termed "a vast rural health plan". All preexisting health organisms involved in specific, state-administered projects (eg, the anti-malaria and anti-trachoma campaigns), were to become part of the network of Secondary Centers. The directors of these centers, called *hygienists*, were charged with "[...] carrying out statistical, demographic, epidemiological and hygienic-social studies of their district, to accurately determine the causes of disease [...]" as the basis of the institute's activities. The population to be served by each secondary center was limited to a maximum of 100.000, although centers were set up only in cities and towns whose city councils placed physical space and material means at their disposal (Order of June 14,1935).

Conclusions

Coping with the deficiencies in public health was an objective of the program of modernizing Spain, that was formulated in the 1898 crisis that followed the loss of the war against the USA. It steammed from a conciousness of the delay in comparison with other European countries in matters of transmissible diseases and mortality, which turned into a demographical handicap for Spain in the concert of nations. Successive governments attacked the problem. Although never high on the long list of priorities, the attempts at solving health problems persistently seemed to be aimed at improving or consolidating the social foundation of the political regime, especially through its ideological basis, owing to its lack of practical effects until the mid-twenties, and particularly to the time of the Second Republic.

The most notable feature of this process was the growing acceptance by the State of responsibility for health matters, accompanied by the creation of a

surveillance system served by newly trained specialists. These new professional bodies favored the spread and strengthening of state administrative responsibilities, which at the same time served their own monopolistic interests. The strongest agitation campaign, labeled "a health crusade", and organised by those qualified strata of health officers and doctors who were at the sametime leading political figures of the dynastic parties, ocurred in parallel to the years of 1917-20, a period of utmost social unrest. Its demands - extension of the Public Health Inspectorate, the establishment of a Health Ministry and a Health Insurance project - served to extend professional areas of competence as well as clearly postulated a conciliatory participation in the so called "social question".

Further historiographic studies of the evolution of public health and health care in Spain after 1939 are lacking, however, it seems clear that the same lines of development or most of them were kept subsequently implemented under Franco's rule.

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NOTES

1) Cfr. NADAL J., *La población española, siglos XVI a XX*, 3a ed., Ariel, Barcelona 1984; SANCHEZ JIMENEZ J., *La población, el campo, las ciudades*, in: J.M. Jover Zamora (ed.), *Historia de España, XXXVII. Los comienzos del siglo XX. La población, la economía, la sociedad (1898-1931)*, Espasa-Calpe S.A., Madrid 1984, pp. 173-248.

2) Regeneracionismo strictly identifies certain lobbies (Liga de Productores, Unión Nacional, etc.) and a handful of political writers like Joaquín Costa. Cfr. TUÑON DE LARA M., *La España del siglo XX*, 3a ed., vol. 1, Laia, Barcelonamm 1974, pp. 15-16 and *Medio siglo de cultura española, 1885-1936, Tecnos*, Madrid 1977, pp. 57-78.

3) REAL CONSEJO DE SANIDAD, *Cuestiones fundamentales de Higiene Publica en España*, E. Teodoro, Madrid 1901.

4) CAPEL H. - TATJER M., *Reforma social, serveis assistencials i higienisme (1876-1900)*, in "1891-1991. Cent anys de Salut Publica a Barcelona", Ajuntament, Barcelona 1991, pp. 31-73.

5) HAUSER8 P., *Madrid bajo el punto de vista médico-social*, Vol. 1, 1902, Editora Nacional, Reimp. Madrid 1979, p. 226.

6) PULIDO FERNANDEZ A., *Saneamiento de poblaciones españolas. Sevilla*, C. Velasco imp., Madrid 1902.

7) HAUSER P., *Geografía médica de la Península Ibérica*, vol. 2, Imp. Eduardo Arias, Madrid 1913, pp. 235-236.

8) MEMBRILLERA F. de G., *El problema sanitario de España. Exceso de mortalidad. causas que la producen. Influencia de la Higiene en la Economía nacional. Medidas de gobierno y acción de los ciudadanos para higienizar España y arrebatar a la muerte más de 100.000 vidas por año*, Instituto de Ingenieros Civiles, Barcelona 1921, pp. 29-66.

9) Cfr. RUBIO DE LA TORRE C., *Compendio de legislación sanitaria española*, Sucesores de Rivadeneyra, S.A., Madrid 1926, p. 80. INSPECCION DE SANIDAD DEL CAMPO, *Avances de los inventarios del paludismo y de aguas potables. Datos remitidos por los Inspectores Regionales*, Ministerio de Agricultura, Madrid 1918, pp. 25-26.

10) PASCUA M., *Mortalidad específica en España*, vol. 2, Comisión Permanente de Investigaciones Sanitarias, Madrid 1935, p. 26.

11) Cfr. chapters by BERNABEU MESTRE J. and RODRIGUEZ OCAÑA E. in *Las estadísticas demográfico-sanitarias*, Instituto de Salud Carlos III, Madrid 1992, pp. 27-44 and pp. 35-60.

12) *Memoria*, in "Boletín demográfico sanitario", 1905, p. IX.

13) MARTIN SALAZAR M., *La Sanidad en España. Discursos leidos ante la Real Academia de Medicina en la recepción pública del Ill.mo Sr. Doctor... el 8 de junio de 1913*, Impr. Colegio Nacional de Sordomudos y Ciegos, Madrid 1913, p. 90.

14) MURILLO PALACIOS F., *La defensa social de la Salud Pública*, Madrid, (1918) [reimp. in RODRIGUEZ OCAÑA E. (ed.) *La constitución de la Medicina social como disciplina en España, (1882-1923)*, Ministerio de Sanidad y Consumo (Colección Textos Clásicos Españoles de la Salud Pública, n. 30), Madrid 1987, pp. 113-159] p. 122.

15) PULIDO FERNANDEZ A., *Sanidad pública en España y ministerio social de las clases médicas*, Est. Tip. Enrique Teodoro, Madrid 1902, p. 23.

16) MEMBRILLERA, *op. cit.*, p. 21.

17) MARTIN SALAZAR, *op. cit.*, p. 66.

18) MURILLO PALACIOS, *op. cit.*, p. 206.

19) Around 1.190 cases per 100.000 in Spain compared to 43 in England, 73 in Germany, 186 in France or 136 in Italy.

20) A. Fernandez Caro, in p. III of Membrillera, *op. cit.*.

21) Membrillera, *op. cit.*, pp. 105-107.

22) Cfr. Lopez Piñero J.M. et al., *Diccionario histórico de la ciencia moderna en España*, vol. 1, Península, Barcelona 1983, pp. 260-262.

23) Rodriguez Pinilla, *La Medicina politica en España. (Recuerdo de mis dias de inspector sanitario)*, in "La Medicina Social Española", I, 1916, pp. 405-410.

24) The control of prostitutes was the first regular preventive measure enforced by municipal health services in Spain, started from 1865 and particularly extended from 1875 on.

25) Rico Avello C., *Historia de la Sanidad española, 1900-1925*, Imp. E. Giménez, Madrid 1969, pp. 151-158; Valenzuela Candelario J. - Rodriguez Ocaña E., *La politica sanitaria ante la crisis epidémica de 1918. Reivindicación de un Ministerio de Sanidad*, in "Actas del VIII Congreso Nacional de Medicina", Universidad de Murcia, Murcia-Cartagena, 18-21 diciembre 1986, 1988, pp. 514-523; Huertas R., *Medicina y politica en la crisis final de la Restauración: la propuesta de un Ministerio de Sanidad*, in "III Congreso de la Asociación de Demografía Histórica", Braga abril 1993 (preprint).

26) Martin Salazar M., *El Ministerio de Sanidad y del Trabajo*, Imp. Suc. E. Teodoro, Madrid 1921; Huertas, *op. cit.*.

27) Cfr. Muñoz Machado S., *La Sanidad Pública en España. (Evolución histirica y legislación actual)*, Instituto de Estudios Administrativos, Madrid 1975.

28) Inspeccion de Sanidad del Campo, *Avances de los Inventarios del paludismo y de aguas potables. Datos remitidos por los Inspectores Regionales*, Ministerio de Fomento, Dirección General de Agricultura, Minas y Montes, Madrid 1918.

29) Rico Avello, *op. cit.*, pp. 164, 178.

30) Rodriguez Ocaña E., *op. cit.*, 1987, pp. 42-44.

31) Rodriguez Ocaña E. - Ortiz Gomez T., *Los médicos españoles y la idea del Seguro Obligatorio de Enfermedad durante el primer tercio del siglo XX*, in "Actas VIII Congreso Nacional de Historia de la Medicina". Murcia-Cartagena diciembre 1986, Universidad de Murcia, Murcia 1988, pp. 488-501.

32) Cfr. Lopez Piñero et al., *op. cit.*, vol. 1, pp. 399-400.

33) Apart from other low-rank dispositions, this measure had been firstly ordered by a Royal Decree of October 31, 1901, under Angel Pulido's tenure as General Director of Health, a coreligionist of Gimeno.

34) Some of their components were Cortezo, Pulido, Martín Salazar, Francos Rodríguez and Murillo, according to Rico Avello, *op. cit.*, p. 160.

35) Rico Avello, *op. cit.*, p. 384.

36) Rico Avello, *op. cit.*, p. 173.

37) Cfr. Rodriguez Ocaña, E., *El resguardo de la salud. Organización sanitaria española del siglo XVIII*, in "Dynamis", 7-8, 145-170; Granjel L.S., *Legislación sanitaria española del siglo XIX*, in "Cuadernos de Historia de la Medicina Española", 11, pp. 255-307.

38) Iglesias Carral M., *(1916) El médico social*, in "Medicina Social Española", 1, pp. 289-296, reprinted in Rodriguez Ocaña E., 1987, *op. cit.*, pp. 231-240.

39) Ferret G., *Los Institutos provinciales de Higiene*, in "Medicina Social Española" 4, 1919, pp. 321-325; Lopez de La Molina, *No debe continuar así*, in "Medicina Social Española" 5, 1920, pp. 173-175.

40) Garcia Duran R., *La Asamblea de Inspectores de Sanidad*, in "Medicina Social Española" 1, 1916, pp. 740-744; *ASAMBLEA Nacional de Inspectores provinciales de Sanidad celebrada en Madrid del 26 al 30 de Noviembre de 1916. Conclusiones aprobadas por la Asamblea*, in "Medicina Social Española" 1, 1916, pp. 763-766 and 2, 1917, pp. 22-28; 59-64.

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42) Puerto Sarmiento F.J. - Cobo J., *El laboratorio municipal de Madrid en el último tercio del siglo XIX*, in "Dynamis" 3, 1983, pp. 149-172; Roca i Rosell A., *História del Laboratori municipal de Barcelona de Ferran a Turró*, Ajuntament, Barcelona 1988; Salavert V. - Navarro J., *La sanitat municipal a València (segles XIII-XX)*, Edicions Alfons el Magnànim, València 1992.

43) Martin Salazar, *op. cit.*, 1913, p. 92.

44) See note 42 and further Roca Rosell A., *L'higiene urbana com a objetiu. Notes sobre la história de l'Institut Municipal de la Salut (1891-1936)*, in "1891-1991. Cent anys de Salut Publica a Barcelona", Ajuntament, Barcelona 1991, pp. 75-103.

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46) *CONCLUSIONES de la Asamblea nacional de químicos y bacteriólogos municipales*, in "Los Progresos de la Clínica", 28 (1), 1924, p. XVI.

47) *GRANDES cuestiones médico-sociales. Los problemas de los médicos titulares. III. Las funciones del médico titular*, in "Mundo Médico", 16, n. 246, 1934, pp. 760-761.

48) See Castejon Bolea R., *Enfermedades venéreas en la España del último tercio del siglo XIX. Una aproximación a los fundamentos morales de la Higiene Pública*, in "Dynamis", 11, 1991, pp. 239-261; Molero Mesa J., *Estudios medicosociales sobre la tuberculosis en la España de la Restauración*, Ministerio de Sanidad y Consumo, Madrid 1987; Molero Mesa J., *Historia social de la tuberculosis en España, 1889-1936*, "Tesis de Doctorado", Universidad de Granada 1989; Molero Mesa J., *Francisco Moliner y Nicolás (1851-1915) y el inicio de la lucha antituberculosa en España*, in "Asclepio", 42, 1990, pp. 253-280; Rodriguez Ocaña E., *Aspectos sociales de la Pediatría española anterior a la guerra civil, 1936-39*, in J.L. Peset (ed.), *La Ciencia moderna y el nuevo mundo*, C.S.I.C., Madrid 1985, pp. 443-460; Uribe-Etxeberria Flores A., *Maternidad y movimiento proteccionista de la infancia, 1890-1930*, in "Nazioarteko Kongresualkerkuntza", Irakaskuntza eta Feminismoa (Sección: Historia de las mujeres, investigaciones en curso)", San Sebastián, 1993; Valverde Ruiz R.J., *Legislación antipalúdica española*, in "Actas VIII Congreso Nacional de Historia de la Medicina", Murcia-Cartagena diciembre 1986, Universidad de Murcia, Murcia 1989, pp. 191-203.

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