



PLUMBISM REINVENTED

Childhood Lead Poisoning in France, 1985–1990

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Although the history of childhood lead poisoning started a century ago in the United States, the first French cases were identified in 1985. Instead of merely adopting knowledge accumulated for decades, the public health professionals and activists involved had to reestablish, against incredulity from medical authorities and resistance from policymakers, all the evidence: that children were the main group concerned; that cases were not isolated but part of an epidemic; that wall paint in old, dilapidated apartments was the source of contamination; and that poor housing conditions, and not cultural practices, were responsible for the high incidence in African families.

This “reinvention” illustrates more general sociological phenomena: discontinuities in medical history, strength of culturalist prejudices toward immigrants, resistance to socioeconomic interpretations of disease, and struggles between different perspectives in public health. The history shows that public health is the product of intellectual and political struggles to impose visions of the world.

This, my dear Friend, is all I can at present recollect on the Subject. You will see by it, that the Opinion of this mischievous Effect from Lead is at least above Sixty Years old; and you will observe with Concern how long a useful Truth may be known and exist, before it is generally receiv'd and practis'd upon.

Benjamin Franklin, 1786¹

A COMPLETE HISTORY OF plumbism, or lead poisoning, would begin with the first testimonies of adverse health effects from the lead industry in Greece and Rome and would continue with the medical treatises written by Paracelsus on “miner’s sickness” in the 16th century and by Ramazzini on the effects of lead poisoning on “white lead makers” in the 18th century.² A more contemporary historiography of lead poisoning begins in Australia in the 1890s with the works of J. Lockhart Gibson, a Queensland pediatrician, or, perhaps more significantly, in the United States in the 1910s with the medical observations of a Baltimore physician, Kenneth D. Blackfan; it continues through the epidemiological studies and policy guidelines of the Centers

for Disease Control and Prevention (CDC) in the 1980s.³

A reader of the history of lead poisoning gets the impression that, for nearly a century, the physiopathology and epidemiology of lead poisoning have become increasingly understood, giving rise to a large amount of medical literature as well as spurring health professionals and agencies into action.⁴ Actually, things have never been so simple or straightforward, even in the United States, where most pioneering public health research and policies have been conducted, but where there has also been much resistance and inertia.⁵

Nevertheless, as data and experience have accumulated, one would expect that in Europe, where old housing is an impor-

tant historical issue, public health would have benefited from a transatlantic transfer of knowledge and long since assessed the seriousness of the problem and prevented its consequences. Such an optimistic view of scientific progress would be naïve,⁶ as the history of lead poisoning in France shows. Not only did the “discovery” of the first signs of the French epidemic not begin until 1985, but it also took at least another 5 years to go through all the stages of the construction of a public health problem, from the identification of the disease and its cause to the experimentation and evaluation of prevention measures, including an assessment of the severity and extent of the problem.⁷ Instead of merely adopting existing knowledge on lead poisoning,

French pioneers rewrote the history of plumbism, albeit at an accelerated pace and with a few original pages. By not taking on board the considerable experience of international public health, particularly that of the United States, the French discoverers of the first cases of lead poisoning among children in the 1980s were forced to start from scratch, similar to what had happened when the first Australian cases were ignored by European and North American authors at the beginning of the 20th century.⁸

Thus, the story of the fight against plumbism is rather discontinuous, not in the Kuhnian sense of scientific revolutions⁹ but in the commonsense meaning of unlearned lessons. From one side of the Atlantic Ocean to the other, the narrative thread was cut, with the actors in this drama doing little more than tying the broken ends together again. Their role consisted first of learning about an epidemic they had little knowledge of and then of winning the support of skeptical public authorities. It is this staggered chapter in the saga of world plumbism that we relate, basing our account on ethnographical research carried out over a period of 5 years in the Paris metropolitan region, where the French epidemic of the 1980s began. It is presented in parallel with the North American experience, which offers, in distinct historical and sociological contexts, interesting similarities a few decades apart.

A NEW DISEASE FROM ANCIENT TIMES

In August 1913, a comatose 5-year-old boy was admitted to Johns Hopkins Hospital in Balti-

more.¹⁰ He had limb spasms and body convulsions. Meningitis with encephalopathy was diagnosed. For 4 weeks, all known infectious etiologies were investigated, from tuberculosis to syphilis, but in vain. After 4 spinal taps, intracranial pressure was lowered and the child's clinical condition improved. He was returned to the Home for the Friendless where he lived. A few months later, he was readmitted with headaches and vomiting. This time, someone noticed a discoloration of the gum, soon identified as a "lead line." The source of the contamination was discovered when the boy was found gnawing the paint of his hospital crib. A visit to the home revealed deterioration of the painted wood of his bed. A month later, he seemed to have recovered and was again released, but he died a few weeks later.

In March 1986, a comatose 2-year-old girl was admitted to Necker Enfants Malades Hospital in Paris.¹¹ After a few hours, she was transferred from the pediatric ward to the intensive care unit in a convulsive state. A diagnosis of viral encephalitis was posited, and various infectious etiologies were investigated, in particular through lumbar punctures. Two weeks later, plumbism was considered, among other hypotheses. The child's blood lead level was found to be 2630 $\mu\text{g/L}$ (the present CDC norm is $<100 \mu\text{g/L}$). The father, a Malian immigrant, explained that his daughter regularly ingested paint at home. After 2 chelation treatments, the child's medical condition partially improved. The social investigation in the apartment where the family lived showed that the paint on the bedroom wall above the crib was completely scratched off to a

height of 1 m. Months later, the child continued to suffer severe neuropsychic sequelae with behavioral disorders.

Baltimore and Paris—2 quite similar medical stories on opposite sides of the Atlantic 73 years apart. They each represented a dramatic case that initiated the deployment of a cognitive and institutional plan of action confronting a new public health problem. Both clinical pictures took a long time to diagnose be-



Photo by Mariano Garate

A dilapidated building with white lead paint on the outskirts of Paris.

cause, in both situations, lead poisoning was not yet a clinical reflex for doctors little aware of environmental issues. And both pathological situations led to investigations at the children's homes, where paint-eating pathogenic behavior was discovered. Obviously, in both situations, doctors were still thinking in terms of symptoms, individual cases, and chelation treatment, not in terms of screening, population studies, and housing improvement.¹² To paraphrase Michel Foucault,¹³ the birth of public health had not yet occurred.

Of course, there are also differences between the 2 cases. First, diagnostic procedures that used to rely on clinical observation were completed by system-

atic tests in the 1980s. The routine of x-ray and biological checkups practiced in the later period provided wide screening of etiologies and therefore better diagnosis of plumbism, as well as other medical problems. Furthermore, as far as the history of lead industry is concerned, the contexts are quite different. Although in the United States at the beginning of the 20th century white lead pigment in paint was not seen as dangerous and was still commonly used, the situation had changed 7 decades later in France. White lead pigment in paint had been recognized as toxic and restricted since 1915; it had been banned from professional use since 1926 and from craft work since 1948. Consequently, it remained only in ancient, often dilapidated housing. Thus, in the first case, lead paint was not yet thought of as a potential hazard, while in the second case it was no longer considered a problem.

In fact, the young African child at the Necker hospital was not the first case of the French epidemic. Six months earlier, in August 1985, a clinical observation had been reported in Trousseau Pediatric Hospital.¹⁴ This patient was also a 2-year-old girl whose parents were from Mali. Rather than dramatic symptoms, the girl displayed chronic anemia, abdominal pain, and slow physical development. There were elevated levels of blood lead, and abdomen radiographies showed opacities. The diagnosis of lead poisoning was later called lucky¹⁵; at that time, a pediatrician would not ordinarily consider lead poisoning, since it was mentioned as a rare disease in French medical publications, and only systematic blood

testing definitively established the diagnosis. The parents, questioned by the doctors, seemed to confirm that their daughter ate flaking paint. The young doctor in charge asked the hospital unit's social worker to intervene to take the child away from the dangerous environment. An investigation at the family's house revealed it to be severely run down and suggested that there might be other cases in the same building. Further testing among the inhabitants confirmed this suspicion.

The social worker then informed the City of Paris Mother and Child Health Care services. However, the consulted public health physician admitted her ignorance on 2 counts: first, on the pathology itself, which she only remembered from hygiene courses as due to contaminated water; second, on how to solve the problem, since finding new accommodation for a family was not part of her professional responsibility. Moreover, she seemed unconvinced that she was facing a serious sanitary issue. In fact, it was the clinicians at the Trousseau hospital who, thanks to the screening of other children in the building where the child lived, found 6 other serious cases and pinpointed the problem.¹⁶ During the next 12 months, 20 children were diagnosed with abnormal blood lead levels, which at the time meant more than 250 µg/L; 2 of the children died from encephalopathy. In contrast, between 1956 and 1981, only 10 clinical cases had been reported in the French medical literature.¹⁷ It therefore seemed unlikely that these first few cases were isolated. When lead poisoning was looked for, it was found.

Consequently, in pediatrician circles beginning in 1986, the pathology began to be talked about as an ailment that was “certainly underestimated in France.”¹⁸ Faced with this evidence provided by clinical medicine, public health professionals slowly moved into action. Because they failed to consult the international literature, however, which would have made clear the source of the poisoning, the whole course of demonstrable evidence had to be uncovered during the following years.

HISTORY AS A PROCESS OF CONSTANT RENEWAL

Stage One: Identifying the Source

The first step toward defining the problem of plumbism consisted of demonstrating that lead poisoning essentially concerns children, and old paint is the cause of contamination. Although these basic notions of plumbism had been known for decades, French doctors and epidemiologists would have to establish them anew.

In Chicago in 1953, 21 cases of lead poisoning in children were discovered in a single hospital, 5 of them fatal. The diagnosis had not been easy: an epidemic of viral encephalitis had been initially suspected, and scientific support had been sought from epidemiologists of the US Public Health Service Communicable Disease Center. Nevertheless, this error had unexpected consequences: “Although the epidemic proved not to result from a communicable disease, the epidemiological approach was of great aid not only in determining the true nature of these 21 cases of lead poisoning, but also in ac-

quiring valuable information concerning the disease.” Two conclusions were drawn from the statistical data on clinical cases and home visits: “The ages of the patients clustered between 1 and 4 years, a period when the risks of accidental poisoning are greatest,” and “Painted walls, woodwork and window sills were the chief sources of lead; except for dried paint, other sources of lead to which these children might have been exposed were not found.”¹⁹

In Paris in 1986, the pediatrician in charge of the Mother and Child Health Care service asked her toxicologist colleague from the City of Paris Hygiene Laboratory to identify the features of the population affected as well as the source of contamination. The investigation concerned the inhabitants of 2 Parisian buildings where cases had just been discovered. Among 52 people screened, only 1 adult (out of 45) and 4 children (out of 7) had lead poisoning (blood levels above 250µg/L). As the pediatrician recalled, “We tested lead in the blood of all people living in the two buildings, adults and children. At the time we had no idea [of what we would find], but there [in the buildings] we found something we did not quite expect: that virtually no adults were poisoned, just one pregnant woman with a blood lead level of 350µg/L; however, we found poisoned children. So this investigation showed us that the pathology primarily affected children.”²⁰

Contrary to what the 2 medical colleagues were familiar with (i.e., adult lead poisoning, known essentially in occupational medicine), the form of the disease they were faced with

was a specific infantile form. The first hypothesis was that lead-contaminated water was the source of the poisoning, in accordance with the then-prevailing etiological model.²¹ Water from taps was therefore analyzed for lead content, which was normal. It was only later that paint on the walls and woodwork of dilapidated homes was considered as a possible source of lead. Old paint samples were then taken in the apartments for chemical analysis. As the toxicologist explained:

It is the parents that drew our attention to the children's habit of scratching off paint below windowsills, so we took paint scrapings and I asked my colleagues to analyze them. They came to see me afterward saying they did not understand, they had found large amounts of lead and wanted to check the results. So we went back to the apartments, we took paint samples again, and then we demonstrated the existence of high levels of lead.²²

The pediatrician and the toxicologist were then convinced: lead poisoning existed, and its cause was old lead paint. Nonetheless, it would take them several years to convince the Parisian and national health authorities of this truth. But before that, they had to face another test.

Stage 2: Demonstrating the Severity

The second step toward defining the problem of plumbism consisted of showing that the prevalence and seriousness of plumbism makes it a public health issue. Indeed, the difficult recognition of a few cases of child lead poisoning and the laborious identification of the source of contamination were not

sufficient to make it a matter of policy; the potential epidemic dimension of the disease had yet to be demonstrated.

In Baltimore in 1956, an epidemiological survey among 333 children living in a congested low-income area showed that 44% had lead blood levels in excess of 500 µg/dL, which at the time was considered the upper limit of normality.²³ Although most of these children were asymptomatic, several were eventually admitted to the hospital with lead encephalopathy. Similar observations were made in Philadelphia, Penn; New York, NY; Washington, DC; and New Haven, Conn. Each time, lower-class families, mostly Black, living

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in poorly maintained old housing, were involved. The first established evidence of this social epidemiology of plumbism came as far back as the early 1930s, again in Baltimore. Through these tragically iterative surveys, it became obvious that one only needed to search for child plumbism to find it wherever certain environmental and social conditions were present. Still, several decades would pass before there was wide recognition of the magnitude of the problem and effective measures to fight it were implemented. The repetition of calls for action in the medical literature until recently

indicate how slow the process has been.

In Paris in 1987, the 2 Parisian medical colleagues, encouraged by the results of the first inquiry, launched another investigation on a larger sample that included 122 children. This time, the objective was to prove that implementation of a systematic program for screening the blood lead levels of children at risk would show that the problem was common in slum areas. As the public health pediatrician explained:

In the first period, from 1985 to 1990, the child lead poisoning issue was considered exclusively a Parisian problem. I remember that our director had written to the Ministry of Health to report about the first lead poisoning cases identified and to get more information about the disease. The official response of the ministry was that it was rather unbelievable and that the problem only existed in Paris—surely lead poisoning was not to be found elsewhere in France. The fact that it was considered to be a Parisian problem allowed a certain inertia on behalf of the national health public authorities that left the issue in the hands of the mayor of Paris.²⁴

To establish the extent of the problem, a simple procedure of cross-sectional study was devised, comparing 2 groups of children living in different environmental and social contexts. Of 82 children seen in 3 Mother and Child Health Care services in a working-class area of Paris, all of whom lived in insalubrious housing, 9% had blood lead levels that exceeded 250 µg/L, whereas none of the 40 children who were included in a Social Security health checkup but lived in recently built habitations had high blood lead levels.

It was at last possible to affirm that “populations at greatest risk are young children between 1 and 6 years old, living in dilapidated housing and of low socioeconomic background” and that “any physician practicing in an urban area should be able to detect the disease more readily.”²⁵ Still, it would be another few years before the Ministry of Health set up the national survey the Parisian professionals had called for. At the beginning of the 1990s, an investigation conducted in several French towns would show that the epidemic extended far beyond the capital: within the at-risk population tested for blood lead, 26% of 1- to 6-year-old children had levels exceeding 150 µg/L, the recently established standard for lead poisoning.²⁶ In the meantime, however, the question of why lead poisoning affected mostly young immigrant children from sub-Saharan Africa still had to be answered.

CULTURALISM AS A COMMON THEORY OF KNOWLEDGE

In a 1927 poster advertising Dutch Boy paint, a blond child leaves fingerprints on a wall freshly painted with white lead paint; however, “there is no cause for worry,” reads the text, since “a little soap and water will remove them easily without harming the paint or marring the beauty of the finish: painted walls are sanitary, cheerful and bright.” At that time, it was still possible to have “white lead promotion campaigns,” since knowledge of the toxicity of this paint was restricted to industrial sectors and a few medical professionals. Awareness would enter

the public sphere in 1943 with an article in *Time* magazine reporting on a study conducted by 2 pediatricians, Randolph Byers and Elisabeth Lord.²⁷ Despite the advertisement’s reassurance, however, children in the 1980s living in deteriorated old housing in Paris and its suburbs, where white lead paint was still present, had much to worry about. Nobody there would think of their painted walls as sanitary, cheerful, or bright; they lived in dilapidated housing in which they were often squatters. The floors of the insalubrious rooms were contaminated with paint dust and fragments.

But there was another difference between the image on the American poster and the reality in French inner cities: in the latter scene, the children were Black. This fact did not go unnoticed among those who discovered the epidemic, as 85% of the severe cases in Paris during the 1980s were children from sub-Saharan African families. However, this finding was masked in 2 ways. First, it was suggested that there were possible biases in the population samples, since screening tests were carried out in preventive health centers where immigrants had better access because they offered free care. Second, the overrepresentation of the immigrant population could probably be attributed to their socioeconomic living conditions.²⁸ Nevertheless, in some cases, not only geographic but also racial features were mentioned: “In the Paris area, most children treated for plumbism are of African origin and Black race.”²⁹

In any case, the much higher incidence of lead poisoning among Black African children

puzzled the physicians and gave rise to some original hypotheses.³⁰ In fact, before wall and woodwork paints were definitely regarded as the sole source of lead, several other potential sources were considered: “potions” that African people drink for treatments, ink used by the “marabouts” (or dervishes) to prepare amulets, and even kohl used in the mothers’ makeup.³¹ Investigations of the lead content of the suspected substances were, however, inconclusive.

The eventual recognition of lead paint as the source of poisoning did not put an end to these cultural interpretations. During the 1980s, the dominant worldwide thesis still maintained that the main mode of contamination was the ingestion of paint flakes.³² Studies showing the role of paint dust, which explains the poisoning in terms of passive intoxication through simple inhalation, were few.³³ In fact, specialists were starting to think that both ways of contamination coexisted, inhalation being particularly common in low-level poisoning and ingestion mainly being related to severe cases.³⁴ But for a long time, pica behavior, defined as a taste for mineral substances, was used to account for the intake of paint fragments; this was sometimes related to geophagy practices, reported to be common in Africa.³⁵ In the United States, the pica syndrome was generally described as a pathological behavior related to mental disorders or relationship problems; some authors considered “mental retardation” to be a predisposing factor, but most incriminated “disturbed mother–child relationships.”³⁶ This interpretation was, however, sometimes

mixed with racial considerations, as most cases occurred among Blacks, whose alleged bad habits could thus be blamed.

In France, the high proportion of African immigrants among children with lead poisoning led social workers and health professionals to view the problem as one of “cultural attitudes,” as one of them put it in an interview.³⁷ One particular cultural aspect was a matter of concern: the geophagy encountered among West African women, who were said to eat clay when pregnant, and the supposed impact of this practice on their offspring who imitated them.³⁸ This explanation, although dominant, did not exclude the role of psychopathological factors. Nevertheless, it seems that whereas the Americans had a tendency to “psychologize” their explanatory models, adding moral judgments that amounted to blaming the victims (“The mothers give their children too little attention”), the French were more inclined to “culturalize” the interpretative framework, often with the more or less conscious intention of avoiding stigmatization (“It is not their fault, it is because of their culture”). Both models, however, left aside all social aspects of the housing and poverty problem.

In Paris, this search for cultural causes went so far as to call on ethnologists for assistance to study African family cultural practices. The 2 researchers sent to the premises wondered, “Do the culture and way of life of sub-Saharan Africans resettled in France particularly expose them to lead salts contained in the paints of their domestic environment?” They concluded that minerals, clay in particular, can be “at the same time a delicacy, a

medicine and a nutriment for these people, as well as a trading item, subject to gift and counter-gift.” Therefore, “the active ingestion of paint fragments in Paris should not be related to the European biomedical or cultural norms, but rather more to autochthonous norms that approve and value geophagy.”³⁹ This interpretation suggested that African families were not to blame but rather that their cultural differences needed to be understood. However, it downplayed the fact that because these families had arrived when all other opportunities for accommodation were closed, they were forced to live in dilapidated buildings where old paint was common and where children had a high risk of lead poisoning. It led many public health and housing agents to encourage the implementation of educational programs stressing behavior change, rather than considering the insalubrious housing, the extreme poverty, and the illegal status of immigrants as priorities for taking public action.

Practical culturalism can be defined as a common sense theory that essentializes culture and overemphasizes the understanding of social reality by its cultural aspects. Practical culturalism is socially efficacious, particularly in the field of health and medicine, first, because it gives an acceptable form to prejudices against others (shifting the blame from individuals to the abstract concepts of origins and traditions), and second, because it avoids putting a political perspective on social problems (transforming inequality issues into educational questions). This attitude was precisely what humanitarian associations campaigning against lead

A destruction permit for insalubrious housing on the outskirts of Paris.



Photo by Mariano Garate

“Against learned but erroneous evidence, as well as against institutional resistance, these activists asserted that plumbism was a disease of living conditions and not a disease of culture.”

poisoning were striving to denounce in the late 1980s. As proclaimed by one of the most committed members of these nongovernmental agencies, later in charge of defining the national program for the Ministry of Health:

The recurrent argument about the specific cultural features of the population affected has to be discussed. In France, the great majority of contaminated children are African, but evidence elsewhere in the world shows that in Great Britain, Indian children are the most affected by the disease, and in the United States, [children with lead poisoning] belong to African American and South East Asian communities. Yet, the common factor between these populations of different origins cannot be cultural but is, first and foremost, the derelict housing conditions they live in. The use of this cultural argument leads one to focus attention on the pica issue, instead of focusing attention on the lead risk exposure. Indeed, the main cause of lead poisoning was not the pica behavior, but the lead.⁴⁰

Against learned but erroneous evidence, as well as against insti-

tutional resistance, these activists asserted that plumbism was a disease of living conditions and not a disease of culture.

The pathology affected mainly Africans because they represented the vast majority of the latest waves of immigration and because, among the immigrant population, they lived in the most dire situations. Several reasons can explain this precarious situation. First, Africans arrived after the borders were closed to immigration and so they often lacked residence permits. Second, because of discriminatory practices on the labor market, they had difficulty in finding jobs. Finally, they rarely had access to social housing owing to restrictive policy measures affecting immigrants.⁴¹ While insisting on this social explanation of lead poisoning, some health professionals nonetheless remained sensitive to explanations based on cultural singularity: “When 60% to 70% of Black Africans are found with lead poisoning,” declared the public health pediatrician who carried out the first Parisian in-

vestigations, “one can actually think that there are overdetermining factors. Indeed, there are a whole series of factors like socioeconomic factors, the quality of dwellings, and probably also confounding factors such as behavior and tolerance.”⁴² Culturalism bred in the bone comes out in the flesh.

THE ULTIMATE AMERICAN LESSON

In Paris in October 1990, the first conference on lead poisoning in children was held under the patronage of the Ministry of Health.⁴³ It was organized by the Department of Health and Social Affairs of the Paris Region and 2 nongovernmental organizations, Médecins Sans Frontières and Migrations-Santé. For 2 days, 360 physicians, nurses, town planners, social workers, and health public servants discussed child lead poisoning in all its aspects, including strategies to ensure its prevention. This conference was a turning point in the French history of the epidemic. The attendance of public health representatives testified to the recognition of lead poisoning as a national priority and the state’s commitment to fight it. While the regional director of health opened the conference by suggesting that lead poisoning “could be caused by the ingestion of paint flakes containing lead salts,” in his closing remarks, the national director of health backed up the urgent need to put the problem on the ministry’s agenda and, in particular, to address the issue of insalubrious housing.

In this effort to establish epidemiological evidence of plumbism, the way North American public health experience was

used as evidence is noteworthy. In their introductory speech, the 2 doctors from the humanitarian nongovernmental organizations that helped organize the conference referred to a series of epidemiological studies conducted in the United States to challenge psychological and culturalist interpretations of pica. Moreover, 2 major American experts were invited to the conference to present their state's and city's experiences: the head of the Department of Lead Poisoning Prevention at the Kennedy Institute in Baltimore and the director of the Program on Plumbism at the Health Department of Rhode Island. For the organizers, their authority would bring them a decisive victory:

We decided that we definitely had to invite American specialists to the conference. It was not possible to hold such a meeting without showing the foreign experience. Two American experts presented their work. For French participants, it was very useful to see what had been done elsewhere in concrete terms. Many of them were local health professionals, some came from the provinces. It was very important that the Americans tell a story where, first, lead intoxication affected different kinds of populations—this allowed the argument of the disease's cultural cause to be put into perspective—and second, show that housing rehabilitation programs had long been implemented.⁴⁴

Clearly, the US history of plumbism had to be presented as a persuasive example of the fight against lead poisoning, one in which convincing evidence counted more than factual truth.⁴⁵ The US example, however idealized it was, served as a political icon. Indeed, in a scientific controversy, it is not enough to be right; one must also be able to rely on

efficient networks.⁴⁶ The key point is to establish alliances of support with influential partners.

This process of capitalizing on North American experience and legitimacy had started 2 years before. After rebuilding the entire body of knowledge on child lead poisoning through piecemeal investigations far from the scientific gold standard, the activists soon realized that to go further they would need to learn what had been done elsewhere. They had to substitute the exacting requirements of science for what had been almost amateurish epidemiology. A few of them, who would later become the organizers of the conference, decided in 1989 to make an exploratory mission to the United States. They visited the CDC in Atlanta and the public health services in Massachusetts, Maryland, New York, and Rhode Island. Back in France, they wrote a report that presented the main lessons of their trip, covering the risk evaluation aspects as much as the legislation designed for prevention.⁴⁷ In the preface, the head of the Public Health Department at the Faculty of Medicine Bichat wrote enthusiastically: "A 'gang of four' is at the origin of this document. They tell us the story of the conquest of the West." He added: "Why reinvent the past when experience exists? The conclusion of the report draws the lessons from the American experience." The cycle was now complete. Everything about the pathology of plumbism had to be reinvented, and ultimately everything was to be rediscovered.

Why such an arduous path—that of reinvention—had to be followed is an important remaining question. Yet this is less exceptional that one might think. The history of child lead poisoning,

like the history of numerous other pathologies, rarely progresses in a smooth linear manner.⁴⁸ Even in the United States, given as an example by French activists, the road to the recognition of plumbism was long, with industrial resistance, institutional hesitations, scientific wrong tracks, and public health inertia leading to delays in implementing effective policies.⁴⁹ In the French case, one simple and partially accurate explanation would be to attribute these time gaps to ignorance of the scientific literature. Parisian health professionals often upheld this explanation: they simply hadn't read it. However, there is more to it, and it is probably necessary to understand this appropriation of new knowledge as a complex and differentiated phenomenon.

Pediatricians, who were the ones confronted with poisoned children, were prevented from seeing beyond the clinical cases because of the strength of biomedical habits associated with a lack of epidemiological culture. Since they were mainly restricted to neurological complications, in which the poisoning was severe, they considered lead poisoning to be a rare disease; they would never use their authority to send social workers to investigate the children's homes. For local authorities, in particular those in charge of housing policies, the political and economic issues were sensitive; the populations at risk were immigrants, sometimes illegal ones at that. Besides, the cost of housing measures, whether the rehabilitation of apartments or accommodation for families, was dissuasive. Finally, they had few connections with public health specialists. Regarding national

institutions, especially the Ministry of Health, several elements converged: the objectives of the decisionmakers tended toward medicine and hospitals rather than social and environmental issues; very few administrators had been trained in public health or were prepared to deal with new problems; in the High Committee for Public Health, which was the main consultative institution, the toxicology expert was closely linked to the painting industry.

In the French context, 2 other more historical factors must be taken into account. First, public health as a professional and institutional organization remained extremely weak, both locally and nationally, as was shown in the same period by the failure of the state when confronted with the AIDS epidemic.⁵⁰ Second, the image of plumbism, with its dilapidated buildings and poor families, harkened back to a distant past, that of the 19th century with its insalubrious housing.⁵¹ Thus, denial of lead poisoning resulted from a mixture of lack of competence and conflicts of interests, an absence of public health culture and structures, and practical considerations as well as symbolic effects, sometimes reinforced by incredulity or bad faith.⁵² No wonder it took a few years to conceive of plumbism as a public health problem.

Indeed, 5 years to recognize a new environmental issue could be considered a relatively short time, compared with what happened in the United States. This period was actually longer, however, since cases of severe lead poisoning had been diagnosed for several decades before the first public health response was

decided in 1985 (as indicated by home visits, notification of authorities, and further epidemiological investigation) and since effective legislation was not enacted until 1998 (when the law against social exclusion was passed).

But whatever chronological criterion is used or normative evaluation is given, the interesting fact is that, in spite of all available knowledge, it was necessary in France in the 1980s to demonstrate again the nature of lead poisoning in children. French public health actors repeatedly attempted to cast doubt on the transferability to France of North American results in the field of lead poisoning. France is not America, they explained. In France, cases of plumbism were few, the children affected were mainly Africans, and contamination was a matter of behavior. It was therefore necessary to establish that one dealt with an epidemic, that the children belonged to an urban proletariat, and that poisoning came from insalubrious housing, as was the case in the rest of the world. Against the skepticism of some and the bad will of others, against ordinary prejudices and professional responses, the social reality of child lead poisoning had to be reinvented before it could be rediscovered. The history of plumbism therefore reminds us that public health is always the product of intellectual as well as political struggles aimed at imposing a certain vision of the world. ■

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This article was accepted November 4, 2003.

Contributors

D. Fassin prepared the design of the research, contributed to interviews of key actors and analysis of data, and wrote most of the article. A.-J. Naudé participated in the design and analysis of the research, did most of the bibliographical and empirical investigation, and contributed to the writing.

Acknowledgments

This article is based on a study funded by the French Ministry of Research.

We are grateful to those who allowed us to interview them, thus sharing their experience of this history.

Endnotes

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