



HAL
open science

Georges d'Avenel: an economic historian ahead of its time

Alain Alcouffe, David Le Bris

► **To cite this version:**

Alain Alcouffe, David Le Bris. Georges d'Avenel: an economic historian ahead of its time. 2021 European Society for the History of Economic Thought Conference "Development and Underdevelopment in the History of Economic Thought", European society for the history of economic thought (ESHET), Oct 2021, Sofia, Bulgaria. hal-03551429v1

HAL Id: hal-03551429

<https://hal.science/hal-03551429v1>

Submitted on 2 Feb 2022 (v1), last revised 11 Jul 2023 (v2)

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Georges d’Avenel

An economic historian ahead of its time¹

Alain Alcouffe, University of Toulouse 1 Capitole, alain.alcouffe@ut-capitole.fr
David Le Bris, Toulouse Business School, d.le-bris@tbs-education.fr

Abstract:

At the end of the 19th, Georges d’Avenel produced a highly original work in various fields. Unsatisfied with the usual way to write history, he turned his attention to quantitative data to understand the past. In particular, he built series of prices of multiples goods and services from 1200 onwards. He proposed a documented analysis of long-term changes in prices as a result of the technical progress, in income and wealth inequalities as captured by the top 1%, as well as in the evolution of mentalities. His approaches were criticized both by both new professional "Republican" historians than by Conservative analysts. However, his data used by Pareto, Fisher, Frisch or Marshall are still used in current economic history and his analysis fertilized various fields in particular the Ecole des Annales.

Table of contents

1. Introduction.....	1
2. Biographical sketch of an “amateur éclairé”	3
3. D’Avenel’s history of prices	6
4. An original figure in the “high society”	11
5. Reception of d’Avenel’s history of prices by historians and economists.....	16
6. Original economic investigations	22
7. Conclusion	28
Bibliography.....	29

¹ Presented to the Eshet Conference, Development and Underdevelopment in the History of Economic Thought, Sofia, 8-10 October 2021.

1. Introduction

In recent decades, many economists have renewed with history for various reasons such as to observe long-term phenomenon (e.g. inequalities, Piketty 2001), rare events (financial crisis) or to underline the age-old origin of some factors (persistent studies). Renewed because, at its origin political economy was imbedded with what is now called economic history. Vauban or Petty as well as the classical school of economics or Marx all employed historical evidence in their study of economic practices, social phenomenon, and the capitalist system. Marx even built a theory based on history. The recognition of a field of scholarship distinct from economics appears with the Marginal revolution in economics which intended to distinguish it from history while at the opposite the German historical school and its counterparts in various countries, as well as the institutionalists, were dismissive of the abstract economic theory. This split between economic history from economics creates a dilemma for the history of economics: should economic historians take place in the history of economics? Dealing with this issue, Vibha Kapuria-Foreman and Mark Perlman coined the expression of Economic Historian's Economist in order to stress the credentials of Simon Kuznets².

At the turn of this split, Georges d'Avenel, a worldly and excentric researcher, provided historical data to, *excusez du peu*, Pareto, Fisher, Kuznets and Marshall among others. Moreover, he did not limit himself to a simple data collection on various issues. Adopting a fully empiric approach, he deducted from repeated observations of the past, various "discoveries" that fertilized debates on topics as inequality, living standards, welfare, human capital and social transformations. Our contribution aims to introduce this contributor to the economic debates forgotten by historians of economics and to assess his surprising legacies.

Despite Georges d'Avenel was sometimes ascribed the title of economist, he was very cautious not to be involved in the battlefield of the Methodenstreit and was firstly a

² An Economic Historian's Economist: Remembering Simon Kuznets Vibha Kapuria-Foreman and Mark Perlman *The Economic Journal* , Nov., 1995, Vol. 105, No. 433 (Nov., 1995), pp. 1524-1547

historian, even if not a professional one, proud of his familiarity with archives. His dissatisfaction with the history of battles and great men, he turned his attention towards the economic life of peoples to understand behind “bark of things” and the “faits divers of history”. He introduced his approach of using socio-economic facts to write a history of Richelieu. Later, taking the opportunity of a competition opened by the Academy of Moral sciences he launched a huge investigation of the French prices from the 12th to the 19th century. The scope of his inquiry surpasses the precedent posed by Thorold Rogers for England. More importantly, he used the various data collected, not only prices, to propose analysis or even theories to understand socio-economic life assuming that economic rules were the same whatever the context. Misunderstood by his fellow historians, he found recognition through the publication of large audience books and numerous articles in the intellectual *Revue des Deux Mondes*. As a public figure, he was frequently involved in debates of his time, assuming original positions especially downgrading the role of politics in the improvement of the fate of the human kind. His character was important to enough to deserve a full pamphlet wrote about him by Mauras.

Far from this public life, the data he collected as well as facts and discoveries he stressed were used by distinguished economists such as Pareto about inequalities, Frisch on economic cycles and Veblen on conspicuous consumption. His quantitative approach of history also paved the way for the *Ecoles des Annales* as recognized lately by some of its eminent members. His discoveries on the changes in the ways of life are now celebrated by sociologists. Georges d’Avenel thus deserves to be recognized as a precursor of economic history in a broad sense.

The next section depicts some features of Georges d’Avenel’s life. The third one presents his main work on history of prices while the fourth section shows d’Avenel specific position in the high society. The fifth section exposes the reception of his studies by historians and economists from the 1890’s to the first decades of the 21st century. The sixth section exhibits his economic original economic investigations. The last one concludes.

2. Biographical sketch of an “amateur éclairé”

D’Avenel (1855-1939) was born in Neuilly, a rich city bordering Paris, to Henri d’Avenel and his spouse née Aglaé d’Hémeric de Cartouzière, a family whose two branches belonged to the French nobility of Normandy; a d’Avenel is mentioned in the companions of William the Conqueror. His father (1822-1864) gave as occupation “landlord” and actually the family owned lands in Normandy. His uncle, Joseph d’Avenel (1810-91) was an erudite who very young has visited Palestine and wrote a travel diary. He published poems, novels but he was a passionate historian and member of local antiquarian societies which helped his nephew in his research. Georges studied at Collège de Vaugirard, an institution established by the Jesuits where Charles de Gaulle’s father taught belles-lettres. It seems that Georges did not attend any higher education establishment and entered the French administration as soon as he could, in a period marked by the changes of regimes after the fall of the Second Empire.

His career as a civil servant was brilliant: in 1873, at 18, he became Chief of Staff of the Prefect of Creuse, in 1874: Chief of Cabinet of the Prefect of the Loir et Cher, attached to the cabinet of the Ministry of the Interior and editor at the Ministry of the Interior. From 1st November 1877, Head of the Secretariat of the Departmental and Communal Administration of the Ministry of the Interior. In July 1880, he placed on lay-off at his request, after a total of seven years of administrative services. His biographs relate this decision to the evolution of French policies vis-à-vis the congregations that lead to the expulsion in 1880 of most of the religious orders offering teaching (“law Jules Ferry”). Nevertheless, there is no evidence of this motive in the following writings of d’Avenel whose position vis-à-vis the Catholic Church was original. Despite his Catholicism, he was in favour of the separation of the Church from the State (d’Avenel 1890). Anyway, this dismissal opened a period during which d’Avenel was uncertain about his professional statute. In April 1880 when he married Laura Jane Delauncey Meinell³, the daughter of an American colonel, he indicated he was “redacteur at Ministry of the interior” but on the birth certificates of his children in 1881 and 1885, he simply

³ She died in the tragic fire of the Bazar de la Charité in 1897. The Bazar de la Charité was an annual charity event organized by the French Catholic aristocracy in Paris from 1885 onwards. The fire claimed 126 lives, many of them aristocratic women.

indicated he was without profession. Later he defined himself as landlord and eventually in 1902 as “man of letters”. Clearly, he was uncomfortable with the occupational categories.

Indeed, he had a bunch of activities and he was not always occupied with archives and writings. He owned some estates where apple trees were grown to make cider. His part in this industry was significant enough so that he was nominated commissioner for this kind of beverages at the Exposition universelle of Paris in 1900 where his cider was celebrated. But later he was involved in a case of falsification of cider obtained from sugar and water. He was sentenced in absentia in the court of first instance and lost his Légion d’honneur but after five years of struggle he was cleared in appeal in 1917 and he obtained his medal back. He was largely a self-educated “amateur” historian. In the absence of a formal training in history or autobiographical notes, we can only follow his different publications to describe d’Avenel’s making as a historian and an economist.

He was still civil servant when he published his first work in history in 1878 devoted to the *Bishops and Archbishops of Paris*. It was a prosopography that proved his familiarity with the historiography from the Middle Ages to the 19th century and with the archives but far remote from economic issues. This publication was certainly an opportunity to think about the relationship between the French Catholic Church and the State. Still related to the political issues of his time but with a first clear interest on economic problems, he published in 1881 a short book about the history of indirect taxation through the octrois (an entry city tax on goods). This publication demonstrates that he knew very well the history of taxation. These taxes had a history that gets lost in the night of time and as ancient as towns, but were considered as a barrier to free trade by economists from the 18th. Along Turgot (1774), the octrois can be viewed as an abusive tax that cities use to obtain financial resources at the expense of the countryside, by subjecting all foodstuffs to huge taxes that reduce their consumption and are, moreover, borne by the poorest citizens. The National Assembly has suppressed the octroi by a law passed in February 1791 but they were soon reestablished and they subsisted till WW2. During the entire 19th century, the debate has not ceased. The French liberal school, especially the son (Horace) and the grand son (Léon) of Jean-

Baptiste Say, were hostile to the octroi considered as an offence vis à vis laissez faire. The *Dictionnaire* of Coquelin but also the *Dictionnaire de Finances* edited by Léon Say developed the pro and cons of the octrois. The pro argument sustained that it was the only mean permitting local policies. D'Avenel argued and collected evidence in this direction and unsurprisingly he was criticized in the *Economiste français*.

After this first incursion on economic issues, he devoted more than ten years of research whose output was his book on *Richelieu and the absolute monarchy* which was awarded the Grand Prix Gobert at the French Academy, in 1889. From 1893, he also served as editor for the publication of the *Letters of Cardinal de Mazarin*. Even if the issue seems far from economics, d'Avenel adopted for this book a very original approach (explained below) founding most of his analysis on economic understandings of the questions. Unfortunately, his book was soon overshadowed by the biography of Richelieu that Gabriel Hanotaux (1853 -1944), a former foreign affairs minister and historian, published in 1893. However, the comparison between the two books turned after one century in favour of D'Avenel⁴.

But he has already switched to another topic following a query of the Academy of Moral and Political Sciences, which on the proposal of its Section of Political Economy, Statistics and Finance, had given, in 1887, as the subject of competition for the Count Rossi Prize, the following question: *Economic history of the value and income of land in 17th and 18th centuries in France*. In 1889, it had proposed another Count Rossi Prize, *extending the issue from the 13th*. Following this extension, both were judged in 1892, and both prizes were awarded to the same author, Viscount G. d'Avenel (Levasseur 1892). This achievement got a public grant through the *Institut* to publish his results now known as the *Histoire économique de la propriété* published in 7 volumes from 1894 to 1926.

⁴ See D'Albis 2000 for a very positive judgement of d'Avenel while Fernand Braudel wrote a devastating critic of Hanotaux in *Annales*, 1951 6-2 p. 285.

3. D'Avenel's history of prices⁵

For his 1887 prize essay competition, the AMPS asked the candidates to compare economic value and income of land to the wages of farmers, workers and the prices of food and other agricultural products (Levasseur 1892). As the results were not satisfactory, the competition was extended to December 31st 1891. The eight seats devoted to economics and statistics in the AMPS comprised Maurice Block, Athanase Cucheval-Clarigny, Émile Levasseur, Jean Courcelle-Seneuil (replaced by Clément Juglar in December 1892), Léon Say, Frédéric Passy, Paul Leroy-Beaulieu, Henri Germain. Among them, Cucheval-Clarigny and Germain are not remained in the history of economic thought, the first was an erudite librarian of the Ecole Normale and the second was a French banker and politician; he had founded Crédit Lyonnais in 1863 which became one of the main international banks. The remaining six were occupied by scholars of the French liberal school, which they revered more or less. It is noteworthy that two academicians (Block and Leroy) were interested in the topic. There is no evidence that the publication of Rogers' history of prices in England had triggered the ASMP to launch the Prize Rossi investigation on the history of French prices but d'Avenel was aware of Rogers' studies and eager to follow his steps. The minutes of the *Société d'archéologie d'Avranches* states that Georges d'Avenel has used the many connections of the Society to establish contacts with Rogers who had already published the first four volumes of his *History of Agriculture and Prices In England* has replied that "he will be glad to help M. d'Avenel in any way"⁶.

The most involved in the topic of this prize essay competition, was Émile Levasseur, (1828-1911), a French economist and historian. Professor of geography, history and statistics, he has dealt himself with the topic in his 1858 book. In the introduction of his book, he presented "the history of precious metals in the eighteen centuries preceding us, and (made] the present revolution understandable by the example of

⁵ Histoire économique de la valeur du revenu de la terre aux XVIIe et au XVIIIe siècles en France

⁶ Arthur Reed Ropes (better known under his pen name of Adrian Ross) whose parents lived in Normandy was the intermediary between Rogers and d'Avenel). In 1883 he had graduated in King's college with a first-class degree, winning the Lightfoot scholarship for history and a Whewell scholarship for international law. He was elected a fellow of the College. (Revue de l'Avranchin, 1886, Séance du 10 novembre 1887, p. 605)

revolutions and by the almost continuous variations experienced by gold and silver” and he discussed in his conclusion the pro and con of the demonetization of one of the two metals. The book appeared in the turmoil that have provoked the discoveries of gold in California and Australia. Levasseur’s book contained some evidence that he knew Ricardo’s monetary theories and he was also aware of Tooke and Newmarch’s *History of Prices*. The main focus of the call of the AMSP was on land prices which was a hot topic at this time. Indeed, while the agricultural land has been the safe asset for centuries, its relative price was declining at this time.

From his previous studies, D’Avenel was perfectly aware of the difficulties to perform the endeavor proposed by the ASMP which extended the period of observation from a few decades of the 17th century to seven centuries from the 13th to the 18th. For his octroy study, he had undertook to compare the 17th century taxes with the current ones raising the question of the purchasing power of money through time. A point he made forcibly in his study of Richelieu, asserting that "A figure of the past is of interest to us only as much as we know its corresponding value in the present time" (Avenel, Richelieu, t. 2, p. 139)⁷. He repeated this conviction to correctly answer to the goal of the ASMP convinced that in order that his results would be understandable to the readers, he had to compare them with the current situation of the finishing 19th century: “Any prize that is not converted into modern language is a non-lighted lantern” (d’Avenel, 1894 vol. 1: XVI).⁸ For purpose of comparison, he converted all the quantities in modern units (i.e. physical ones as kilograms) and prices into Franc germinal. The goal of this collection is to measure the “material results of the civilization according to social classes” (d’Avenel, 1894 vol. 1: VII). Besides the problems of sources, several difficulties related to economic problems had to be surpassed. D’Avenel published a first part of his work on Richelieu in 1882 as a presentation to the ASMP. This part is devoted to the monetary value and the power of money under Louis XIII. Thus, these monetary issues are at the heart of his questions from the beginning.

⁷ The sentence is abstracted from a chapter whose title is : the value of the money and its purchasing power ».

⁸ Tout prix qui n’est pas ainsi converti en langage actuel est une lanterne non allumée.

To compare prices over time implies to solve three kinds of difficulties. First the measurement units have changed through time and through various parts of France. Therefore, d’Avenel had to convert the old local units into the new metric system. But a still more complicated issue was provided by the currencies. They raise two problems – a minor one concerns the existence of multiple currencies used (legally or not) in the various parts of the kingdom – another raises from the frequent debasement of the *livre tournois*. The livre tournois was an account money while payments were made through various coins corresponding to various mints from different authorities including foreign ones. We know from the Gresham law that moneychangers found their métiers arbitraging to reach the more exact value for each coin. But, in the same time, the French state regularly expressed an “official” value of the livres tournois as expressed in metal. Few years before d’Avenel, Natalis de Wailly published a collection, still the reference, of these official values. D’Avenel rejected these official values of the livre tournois preferring to use market values of the silver content of the livres tournois (or the few other money account used). Taking for granted that these values were correct, d’Avenel could convert the price at various time in quantities of silver. Eventually, the third problem was also the most difficult to solve: the purchasing power of silver changed through the centuries according to prices of goods and services. D’Avenel, already in Richelieu, clearly explain that the comparison of similar quantity of metal at two different points of time is unsatisfying:

Comparing the currencies of two periods does not reveal the power of money in these two periods. This is a mistake that many authors have fallen into. The average weight of the pound, between 1610 and 1643, is about ten grams; but if the pound under Louis XIII weights ten grams, while our current franc weighs only five grams, it only means that this pound is worth two francs by weight, and not that it has only twice as much purchasing power as the franc. (Richelieu t. 2, pp. 158-9.)

He criticized the use of the price of wheat as indicator not only because bread was not the only food and because people had many other consumptions but also because there were various kinds of bread along the social classes and their prices was not uniform. It must be acknowledged that despite he has the intuition that the budget

coefficients (the ratios of expenditure devoted to a particular good or service (or to a category of goods or services, for example food)) should be taken into account to measure the purchasing power of money, he fell short to use them to measure the general level of prices and he relied on sample of unweighted prices. He clearly explained that what is important is the quantity of goods and services we can buy calling for price series:

Purchasing power is the difference between the quantities of goods provided by ten grams of silver in 1640, and ten grams of silver in 1883. It is therefore necessary, in order to appreciate it exactly, to know the price of almost all the objects necessary, or simply useful and pleasant to life, at the time one wants to study. It is not enough, to come to a serious conclusion, to group a few isolated figures together, and to indicate the price of a few commodities. To merit any claim, one must be almost complete, neglect nothing, and take into account all the elements of the existence of the various classes of society. To quote a handful of figures to determine the power of money for a whole century is to proceed by hypothesis, and therefore to remain in the realm of probability.

For example, there are goods that have decreased in price since Louis XIII, or have increased only to a small extent, as a result of new manufacturing processes and new conditions for transport by land or sea. Considered in isolation, the prices of these objects will not reveal the true power of money: this is the price of wheat, which has often been used as the basis for calculations. This is the case here when we say that man does not live by bread alone; he uses many other edible products, he drinks, he heats himself, he lights himself up; he needs clothes, furniture, beasts of burden, which he must buy and feed, and we are only talking here about the poorest. The middle and rich classes have many other needs, interests and expenses. (d'Avenel, Richelieu t. 2, pp. 158-9).

This quotation proves that d'Avenel was well aware of the debates about the index numbers that began to be known and implemented in various European countries (Mitchell 1915). The rationale of the index numbers was again displayed in the first

chapter of the *Histoire*. D'Avenel distinguished three classes of income and wealth in the French society[2] each one associated with a particular structure of consumption.

For starting point let there be taken; at two different dates, a constant figure representing income. Adding up the sum of wants and enjoyments to which the figure corresponds it may be concluded that, if it represents twice, thrice, or four times as much, then the purchasing power of money was twice, thrice, or four times higher at the one date than at the other. Thus, for the rich class, for the middle class, for the working class, there are three special and different powers of money, each of which must be sought separately and which serve as types. (D'Avenel, *Hist. eco*, tome 1, p. 10, quoted in Gide, *Eco. J.* 1895, p. 408)

He also described how he proceeded while grouping products

to compare 2 kilograms of silver, which we take from the circulation of money, one in 1500, the other in 1892, and whose purchasing power we want to know, we need to know not only what each of them will give us of bread, meat, panties and cupboards, but also what they represent of workers' wages, salary and fees, paid services, property acquired or leased, distance travelled according to the locomotion systems in use, values in one word, goods or wealth, according to the generic term that will be preferred to designate the universality of things that are likely to be exchanged and to have a price. (D'Avenel, *Hist. eco*, tome 1, p. 7).

It is noteworthy that d'Avenel avoided to use any formalization of his computations and his explanation of the "pouvoir de l'argent" (purchasing power) appealed to the intuition of the readers without providing how many details that an economist would like to be provided with. The index numbers used to measure the purchasing power of money have a long history and Sauvy pretends that Bodin hinted to some baskets of goods in this context (Sauvy, 1952, p. 88). This approach is more recognizable in the *Reflexions* of Dutot (1738) but it was in 1859 following the history of prices of Newmarch that the Economist began to publish series of index numbers. These index numbers were related to wholesale prices and consumer price indexes did not appear before the turn of the century. It is therefore admissible that the concept was not very

frequent outside some economic circles. Anyway Charles Gide, despite all the compliments he supplied in his review of d'Avenel published in the Economic Journal could not but confess his perplexity[3]:

But how are we to sum up wants or enjoyments? This is what puzzles us. Moreover the author makes no allusion to index numbers, nor to any of the means which have been proposed for estimating the variations in value of the standard (Gide, 1895, p.408).

D'Avenel, himself, was aware of the many hidden hypothesis that were surrounding his computations and if he illustrated in the text with many examples "his discoveries" of the fluctuations of the purchasing power of money, he confined to footnotes the figures which he obtained for various periods between 1201 and 1600 on one hand and between 1601 and 1790 on the other hand as if they were not at the core of his work. Eventually he presented his results on two tables providing estimates of the purchasing power of money from 1200 to 1600 and from 1600 to 1800, d'Avenel being more assertive for the accuracy of his results for the second period.

4. An original figure in the "high society"

By this time d'Avenel also became a regular author of articles for the *Revue des Deux Mondes* where his last article was published in 1937. The *Revue des deux Mondes* founded in 1829 in order to "establish a cultural, economic and political bridge between France and the United States", the Old World and the New. During the fin de siècle, Ferdinand Brunetière drove the review far away of its original locus to establish is as an elite liberal vehicle of haute culture. Among the authors a large share is occupied by historians, François Guizot, Augustin Thierry, but one can found also economists as Louis Wolowski, Paul Leroy Beaulieu, the statistician Alfred de Foville. Most of the authors were rather conservative but one found also a geographer Elisée Reclus who was also a famous anarchist. With 12,000 subscribers in 1914, the *Revue des Deux-Mondes* (RDDM) is the dominant intellectual journal assuming a "magistère moral" (Yon, 2010). Unsurprisingly the contents of the Revue was advertised in most

foreign reviews.

D'Avenel was used to multiple editions of his works. He presented first his ideas in the RDDM whose board he chaired eventually and then he published them in the form of books; he is the author of XX different published books. But many of his articles for the RDDM were actually issued from his main work (d'Avenel, 1894-XX). We listed almost one hundred d'Avenel's articles in *Revue des deux mondes*.⁹ But in addition to articles, it seems that he wrote most of *Chronique de la quinzaine* (the editorial of RDDM) between May 1893 and March 1894. He ceased to write the *Chronique* a few months before the beginnings of *Affaire Dreyfus*. Therefore, he held the "chronique" in the interval between *scandale de Panama* and *Affaire Dreyfus*.

D'Avenel and his second wife also received the elite in her salon whose hours were indicated in the newspaper *Le Figaro*, and he is depicted in Marcel Proust's world:

"She really is astonishing, the little Duchess," said M. d'Argencourt, pointing to Mme. de Guermantes who was talking to G -- . "Whenever there's a famous man in the room you're sure to find him sitting with her. Evidently that must be the lion of the party over there. It can't always be M. de Borelli, of course, or M. Schlumberger or M. d'Avenel. But then it's bound to be M. Pierre Loti or M. Edmond Rostand. Yesterday evening at the Doudeauvilles', where by the way she was looking splendid in her emerald tiara and a pink dress with a long train, she had M. Deschanel on one side and the German Ambassador on the other: she was holding forth to them about China; the general public, at a respectful distance where they couldn't hear what was being said, were wondering whether there wasn't going to be war. Really, you'd have said she was a Queen, holding her circle." (Proust, P ;)¹⁰

⁹ RDDM is available through Jstor despite it is tricky to distinguish his articles from his "chronique de la quinzaine" - besides most of RDDM is also now digitized on gallica.

¹⁰ Elle est vraiment étonnante la petite duchesse, dit M. d'Argencourt en montrant Mme de Guermantes qui causait avec G... Dès qu'il y a un homme en vue dans un salon, il est toujours à côté d'elle. Évidemment cela ne peut être que le grand pontife qui se trouve là. Cela ne peut pas être tous les jours M. de Borelli, Schlumberger ou d'Avenel. Mais alors ce sera M. Pierre Loti ou Edmond Rostand. Hier soir, chez les Doudeauville, où, entre parenthèses, elle était splendide sous son diadème d'émeraudes, dans une grande robe rose à queue, elle avait d'un côté d'elle M. Deschanel, de l'autre l'ambassadeur d'Allemagne : elle leur tenait tête sur la Chine ; le gros public, à distance respectueuse, et qui

Despite the part played by *Revue des deux mondes* in the French literary elite *fin de siècle*, it was nicknamed an *anteroom* of the French Academy, D'Avenel never succeeded to be coopted either in the Academy, or the ASMP or the Collège de France.¹¹

One can thus be surprised that while occupying a prominent place in the Paris *fin de siècle* his academic achievements were rather limited. Indeed, he always remained an “amateur” without any academic position. The single position he never occupied was actually at the University of Harvard where he lectured on the history of France during the winter 1907. He had been invited by the Cercle Français to give the Hyde Lectures¹², funded by James H. Hyde, the very Francophile heir of the Equitable life insurance Co.¹³ J. H. Hyde personally proposed candidates to Charles Eliot, the famous President of Harvard University.

This lack of official recognition can be explained by the profound debates his claims caused both among politicians and academics making himself frequently alone on his side. He was a vicomte in favor of the Republic, a catholic in favor of the separation of the State and the Church and an inspired historian rejected by the university.

A descendant of the ancient feudal nobility, he pictured its decay beginning in the 17th century and he was a staunch opponent to the monarchism. In his first editorial for the RDDM (refXX), he explained his political preferences very clearly for the *Républicains modérés* taking side for the République. He stuck constantly to this position and that explains the hatred from Action française especially after he criticized Maurras in the *Figaro*. D'Avenel position was important enough for Maurras to wrote a 12 pages ironical pamphlet entitled *the Ballade of the vicomte (Gazette de France, 6 février 1902)*. An activist of the Action Française, Léon Daudet, offered later a piquant portray of d'Avenel:

n'entendait pas ce qu'ils disaient, se demandait s'il n'y allait pas y avoir la guerre. Vraiment on aurait dit une reine qui tenait le cercle. Du côté de Guermantes, p. 34 (2^e partie)

¹¹The archives of the Institut have kept many applications but there is no records of the ballots which are secret.

¹² Among the lecturers the authors of *Revue des deux mondes* received the lion's share.

¹³ Unfortunately Harvard archives do not allow to know who attended these lectures but several future researchers in economic history were PhD students at this time

When you meet a solid and jovial fellow, with a flowery face, a hoarse voice, a sparkling vest, sometimes the color of a cauldron and sometimes the color of a gentleman's plum, decorated with gold, who laughs loudly and sprays, who quotes the price of the leg of lamb in the 12th century and that of butter under Charlemagne, who shamelessly interrupts, chatters without respite and makes himself laugh in the mirrors, you will know that you are in the presence of the Viscount d'Avenel, perpetual candidate to the Academy. (Daudet, 1914, p.441-2)

Eventually in the famous Affaire Dreyfus, if he did not take publicly side as far as we know, it is clear from his many writings that he totally rejected antisemitism, whereas Anatole France was the only member of the Académie Française to have sided with the Dreyfusards¹⁴. He has provided himself a clue to his position on the religio-political chessboard.

More broadly, he was able to provoke the reject of the full political spectrum as he claimed the vacuity of politics and political decisions. D'Avenel rejected the idea that the political changes, especially the Revolution, was a causal factor in the living standard of inhabitants; conversely, he insisted on the continuity between the old regime and the 19th century for the life of the main part of the population. He proudly asserted in his introduction to the DHS:

Economic developments have been independent of political or social changes, both in the Middle Ages and in modern times or today. This is the dominant fact that will emerge from this book.¹⁵ (DHS, p. 10)

This was a sacrilege for Republican historians stressing the improvement allowed previously by the Revolution and at this time by the Third Republic. His writings were close to the insult for those involved in the political action:

"Bread" is what they would like rather than laws; "bread" meaning more welfare with more leisure. However, the deputy does not know how to go

¹⁴ <http://www.dreyfus.culture.fr/en/bio/bio-html-anatole-france.htm>

¹⁵ "c'est que les évolutions économiques ont été indépendantes des changements politiques ou sociaux, aussi bien au Moyen-Âge qu'aux temps modernes ou de nos jours. C'est le fait dominant qui se dégagera de ce livre. » (DHS, p. 10)

about it. He has only laws and no "bread" to hand. If we try to make "bread" with laws? This is the question that arises... for the charlatans and the naive. (Paysans Et Ouvriers: Depuis Sept Cents Ans - Page xv)¹⁶

Second uncomfortable situation, Catholic, he was favorable to the separation of the state and the church. He proposed (D'Avenel 1890) a project in which the Church would receive public debt according to the value of its estates nationalized during the Revolution instead to be financed by a state budget; a today neglected aspect of the 1905 debate on the separation between the state and the Church was the principle that, actually separated before the Revolution, the state became in charge of the Church financing as a compensation of the nationalization of its estates. This project has been discussed by Rouxel in the *Journal des Economistes*¹⁷. Fifteen years later, Despite the lack of financial indemnization of the Church by the 1905 law of separation, d'Avenel had praised it. His first "Chronique de la quinzaine" in the RDDM was published during a political crisis. The Panama scandal has provoked the fall of the Ribot government in 1893 replaced by Charles Dupuy in April whereas elections were due in August. They were the first following the Encyclical Letter *Au milieu des sollicitudes* where the Pope invited the French Catholics to accept the Third Republic.

Those of us who were born into these hereditary illusions and lost them on the great path of life, cannot throw the stone at the faithful who have preciously preserved them. But also those faithful who, since Charles X's departure for exile, have not once looked up at heaven, on the eve of a national holiday, - Saint Philip, August 15, July 14, - without wishing it to rain the next day, cannot blame those who finally want to wish good weather and rejoice in it, to put up some flags and light some lamps, - without believing for that that lit lamps make exclusively the happiness of a people, - those who no longer want to live in a

¹⁶ It is bread that they would like rather than laws; "bread", that is to say, an even greater well-being with more leisure. However, the hon. member does not know how to go about it. All he has in his boxes, within his reach, are always laws and no "bread". What if we try to make "bread" out of laws? That is the question for the quacks and the naive.

¹⁷ Rouxel, *Revue critique des publications économiques de langue française*, p. 185 et suivantes, Nr. 8, Août 1890. *The Journal des économistes* argued repeatedly for the separation between the State and the Church. See for example the article published in September 1872, Nr. 81, Séparation de l'Eglise et de l'Etat, par l'abbé ***, pp. 310-47

systematic opposition, sad state of mind that leads to constantly assume, predict, alas! maybe hope for some upcoming disaster (d'Avenel, 31 May, 1893, p. 708).

The "rallied" Catholics were not welcomed by all Republicans so that they were simultaneously considered as traitors by the Royalists and with suspicion by the Republicans. He maintained this defense of the 1905 law in 1921 in two articles of the RDDM claiming that the Catholicism benefited from this law. His argument used here again quantitative approach preceding Gabriel Le Bras' religious sociology quantifying religious beliefs and practices (number of seminarians per department, alms per capita, Sunday Easter communicants, Sunday attendance) reaching general conclusions. But faithful to his approach of the history of mentalities, he did not follow André Siegfried (1913) who has asserted that "the limestone gave the teacher and granite the priest" (p.20). Asking a question that clearly echoed Siegfried one, he wondered if "le Dieu de l'Évangile est exclusivement rural, qu'il plaît mieux à la montagne qu'à la plaine et moins aux pays de vigne qu'aux pays d'élevage"¹⁸(D'Avenel, 1921, p.) but he denied any determinism, stressing the complexities and the historical variations of the relationship between religion and socio-economic factors.

5. Reception of d'Avenel's history of prices by historians and economists

The reception of d'Avenel's work has been also controversial in the academic world. E. Levasseur who has probably been determinant in the choice of the questions of the Rossi Prize as he was eager to use the answers in his *History of the working classes* wrote a long report for the AMSP on the Rossi prize celebrating d'Avenel and his research:

a scholar to whom the general history is familiar and who has original views on the social state of the past; the figures are commented on by an economist who has the right sense and the severity of the price lists is occasionally enlivened

¹⁸ The God of the Gospel is exclusively rural, he is more pleasing to the mountains than to the plains and less so to the land of vines than to the land of cattle.

by a writer who is not lacking in humor. The author's eight volumes - in-folio of prices, which numbered about 58,000 - constitute the most extensive and orderly collection we had on the subject"¹⁹. (Levasseur, 1892)

Of course, Levasseur conceded that "No doubt such a vast work cannot be perfect" (p. 395) but he asserted that d'Avenel has made a "great service to the economic history". Obviously Levasseur was stunned by the volume and the quality of the data gathered by d'Avenel who was awarded a reward of 9,000 Francs for the two Rossi Prizes.

The leading French historical review *Revue historique* published a recension which was also very positive. The author of the review, Éloi Castelot (Anvers, 1844, London 1919) was a Belgian diplomat, historian and economist. He has studied history in France at École des Hautes Études and he published papers in the *Journal des Économistes* and also wrote articles in Inglis Palgrave's *Dictionary of political Economy*. Polyglot, he translated into French books from Russian, German and English, notably. Therefore, he was perfectly able to compare d'Avenel's work not only with the state of the art in France but also in Europe.

However, it is likely that none of our historians or economists will repeat as a whole the gigantic task of stripping and extracting several myriads of documents and calculating modern equivalents of infinite weights and measures - varying like the sands of the sea from time to time and from locality to locality. (Castelot, 1896, 128)

Despite this initial support, the work of d'Avenel was quickly highly criticized. A first terrible attack came from Seignobos (1896), an academic historian, leader of the École Méthodique, which insisted on the importance of the documentation and criticism of sources. Without surprise, Seignobos reproached d'Avenel, a too weak treatment of sources. In an answer, d'Avenel stressed that, at least, he carefully provided all sources unlike Thorold Rogers. He also went in the details of criticisms about several dozens of specific cases. Finally, in a second round of answer to the answer, the irreconcilability

¹⁹ Un érudit à qui l'histoire générale est familière et qui a des vues originales sur l'état social des temps passés ; les chiffres sont commentés par un économiste qui a le sens droit et la sévérité des énumérations de prix est de temps à autre égayée par un écrivain qui ne manque pas d'humour. Les huit volumes in-folio de prix que l'auteur a ressemblé au nombre d'environ 58.000 constituent la collection la mieux ordonnée que nous possédions sur la matière .

of the two approaches is clear when Seignobos rejected the issue itself saying that it is unnecessary to look for price for the whole France for the several centuries if it implies to rely on a secondary non historically verified sources (see Tandler XXXX). According to Demade (2011: 18), this criticism was only the result of professional historians fighting against an “amateur éclairé”. Beyond this conflict of authority, Republican professional historians were also fighting against a supposed political opponent due to his social origin.

More scientifically founded is the criticism formulated by William Shaw in a review published in the *English Historical Review* in 1896 regarding the method to convert prices expressed in old currencies into modern values. As explained by himself (1896) in an answer published in the same review at the end of the year, d’Avenel rejects the idea that ordinances have actual effect on private transactions. These debasements only allowed the state to reimburse its debt and to pay its providers in a devaluated money. Avenel provides several evidence on this lack of effect: most of the ordinance are not accompanied by a new coin mint, too frequent (sometimes within two weeks) contradicting ordinances, the lack of changes in observed prices and the few devaluated coins collected (6%) among the gift to the Hospice de Paris after the “main nominal falsification of history” realized in 1360. This understanding is supported by Boyer (1963).

It would be foolish to believe that the administrations of the Middle Ages, which resembled ours, like a cart resembles a railway, which had practically no budget, no civil servants, were able to easily, and above all promptly, pass coins from their Mints into the pockets of private individuals in Paris and the provinces, with whom they hardly communicated, cash which everyone looked down on, nor were they able to bring in any more cash to which the crowds were attached..²⁰ »

Henri Hauser, famous scholar, Phd supervisor of Fernand Braudel, was also highly hostile to d’Avenel’s work. Commenting in 1910 the publication of *Les Riches depuis 700 ans*, he mocked the conversion in gold francs of a dowry of 1262 – or the revenue

²⁰ https://fr.wikisource.org/wiki/La_Fortune_mobili%C3%A8re_dans_l%E2%80%99histoire/02

of 18th century Member of Parliament (Hauser p. 157). He also rejected d'Avenel's claim of a full independence of economic evolution from any political influence asserting that it is a too excessive view as well as his thesis of a growing inequality of wealth (ibidem, p.159). 25 years later, Hauser was still highly negative on the work of d'Avenel describing him as a "magician" (Hauser, 1936: 75). The work of d'Avenel suffers for years an ambiguous reputation mainly due to the heterogeneity of his sources and these initial negative reactions.

After few decades, a new generation started to revisit d'Avenel's work. It was the golden age of the building of the history of prices with the International Scientific Committee on Price History (Crandall, 1964). Beveridge (1965) states that the work of d'Avenel is 'so unsatisfactory as to be nearly useless' (see Demade, 2011)²¹. Beveridge recommended the use of averages from continuous series instead of prices from various sources as d'Avenel. Paradoxically, Hauser as the French representative for international committee of price history had to present results that broadly confirmed the works of Simiand but also d'Avenel. François Simiand (XXX) offered a comparison of multiple existing statistical price series reaching the conclusion that the work of d'Avenel was not inconsistent.

The next generation of French economic historians working on price reconstitution reconsidered d'Avenel's contribution. Ernest Labrousse, in his PhD, investigated the evolution of prices, in the 18th century. Despite he criticized heavily d'Avenel's methodology, especially the lack of details on his computation of averages and exclusion of outliers, he could not help to admit:

His results are much better than his methods. (...) Nevertheless, Mr. d'Avenel's work will remain as a unique bibliography of printed sources, as the first and most extensive collection of French prices, whose secular and cyclical directions he expresses approximately. (Labrousse, 1932: 1-16)

In a review of d'Avenel (1927) published in *American Historical Review* published in

²¹ This expression is taken from the unpublished memorandum of 1929 by which Beveridge launched the Committee's project ("Memorandum on Suggested History of Prices and Wages (4.3.29)", in: Report 1); d'Avenel's characterization as "nearly useless" will be taken up again in W. H. Beveridge, "Preface", in *Prices and wages in England from the twelfth to the nineteenth century. Vol. 1: Price Tables: Mercantile Era*, W. H. BEVERIDGE (ed.), 2nd edition, London, Cass, 1965, p. XLVIII). Ironically the results of the Committee for France rather confirmed D'Avenel's ones.

1928, as well as in round table published in the *American Economic Review* in 1926, Abott Usher, one father of the US cliometrics stressed the novelty of the 1894 d'Avenel's work and the quality of the sources but the weakness of the econometric treatment. He later devoted an article in 1930 published in the *Review of Economics and Statistics* to test the conclusions reached by d'Avenel. Recognizing some weakness to the methods used by d'Avenel, he concluded "that we cannot wisely undertake to convert the prices and currencies of earlier periods into approximate equivalents of modern currencies". Marczewski (1964), a French economist working on the rebuilding of national accountings, criticized the value in gold francs proposed by D'Avenel but recognized the relevance of the rough data made available.

In her contribution to the *Histoire Economique et sociale de la France* edited by Ernest Labrousse and Fernad Braudel, Daumard (1980) used data from d'Avenel (1918) to document the changes in wealth caused by WWI. And eventually Braudel the leader of the Annales third generation paid him a tribute in the middle of the 1980s:

Criticized mercilessly and ironically yesterday by university historians, the Viscount of Avenel regained our confidence when we realized that our price curves, with all the precautions from homogeneous and long series, finally joined, more or less, those he had deduced from scattered sources. In any case, who doesn't recognize his prodigious knowledge? (...) His approach to approximate orders of magnitude where we have insufficient figures is however ingenious. (Braudel, *L'identité de la France*, Volume 2, Part 2, p. 46-47)

This tribute is actually a reduced one because d'Avenel paved the way of the Ecole des Annales. He expressed several times what will be the credo of this school of thought: a reject of the traditional history, the "battle-history" that remained at "the foam of the waves without seeing the sea". Indeed, d'Avenel adopted a similar approach «for a long time our eyes have seen, in the past, only the bark of things", and he treated very big political events as "miscellaneous facts of history". He expressed several times his view, actually late enough to be read by the Annales historians. The first sentence of his *Les enseignements de l'histoire des prix* published in 1924 is "We are so made

that the noisy history of a single character interests us more than the silent vicissitudes of a people.”

Braudel (*Grammaire des Civilisations*) quoted d’Avenel to explain the end of serfdom and the rise of perpetual renting (*cens*) in a time when land was abundant and man scarce, therefore human labor was more sought after than land”. Recently, Tendler (2013: 23) stressed Georges d’Avenel as a pioneer of the history of economy.

Despite the initial criticism received from historians, d’Avenel’s data has been quickly used by great economists and are still. Vilfredo Pareto in his *Cours* (published in 1897) was the first to introduce D’Avenel data in his theory of money, or rent. Actually, Pareto was cautious vis-à-vis of these data and wrote that “These averages, given by Viscount G. d’Avenel, should only be considered as an approximation that we can accept for lack of anything better” (§ 356 p. 222). He used nevertheless d’Avenel’s data to develop his theory of rent (§775, p.120, on agricultural land, §778, p. 130 on urban land, his theory of interest, () or on the value of land property, on serfdom, §822). Marshall (1919: 668) appreciates d’Avenel transformation of value of wheat in various currencies into hectoliters of wheat expressed in silver or gold francs prices to allow comparisons and his treatment of human capital.

Following the development of statistical methods in economics, d’Avenel series were used in Albert Aupetit’s dissertation (1901). Following Aupetit, Irving Fisher based also his statistical verification on d’Avenel’s series despite mentioning that they are “uncertain” (Fisher, 1911, pp. 235-8). Fisher took into account the period from 1500 to 1900 and he opened the path to long waves studies. Visiting the US, Ragnar Frisch wrote a long manuscript, 'The Analysis of Statistical Time Series', which was widely circulated among American economists with the precious help of Mitchell, although it was never published (Freeman and Louça, XXX). In this manuscript, Frisch used d’Avenel’s data on wheat price from 1200 to 1800 computing ten-years average to support the existence of Kondratief cycles (see Louçã, 1998: 325).

Anyway, the prices collected by d’Avenel remain a wonderful database which is still used to measure the general level of prices (Phelps Brown and Hopkins, 1981), real estate prices (Friggit, 2012) or more specific phenomenon such as the share of military

spending in the French state revenue at the beginning of the 18th century (Jacoby, 1973:25). The former editor of the *Journal of Economic History*, P. Hoffman and his co-authors (2002) used the prices of wines, firewood, candles as well as so much criticized 25-years averages in gold francs for clothing and shoes. Ridolfi (2019 JEH) offers a recent reconstitution of wages in France for the *longue durée* acknowledging the initial effort of d'Avenel.

6. Original economic investigations

The merit of d'Avenel is not only to have provided a rich price database but also to have introduced, or contributed to, original debates in economic thinking thanks to his integral empiricism. Schumpeter (p.782) himself stressed the “d'Avenel had an eye for the wider implications for social and political history of prolonged and pronounced price changes.” Actually, d'Avenel had a extraordinary talent to describe vividly the economic life using his arid tables. D'Avenel is an empiricist claiming that data allows to understand reality. He claims that: “I confess here, in all naivety, that what I discovered, I discovered in spite of myself” (Introduction, *Découvertes d'Histoire sociale*, 1910). He assumed that his way to produce science is the more meaningful:

[his research] oppose, to the imaginative concepts and the plans resulting from the pure reasoning of the men of today, the testimony of precise experiments and laws in some way mechanical that the men of yesterday have tried or undergone. (Introduction, *Découvertes d'histoire sociale*)

A major topic of his time, that is again today an issue of concern, was the inequalities. During the last decades of the 19th century, there was a commonplace among the liberal economists that inequality was decreasing but it was wishful thinking based on theories but backed only by tiny evidence. For instance, Paul Leroy-Beaulieu (1881) has tried to provide evidence of this trend. In the last chapter of his book, he concludes that: “[t]he previous chapters have shown that the distribution of wealth tends to be less and less unequal in modern societies.” D'Avenel used his method of historical data collection to document the evolution an increase if inequalities in recent time. D'Avenel also found that the wealth did not survived for long; Contradicting one of

Piketty's view. It is indeed, not incompatible to observe that wealth is not transmitted over many generations and, in the same time, that at his epoch, the inequalities were rising. The *Journal des Economistes* was eager to celebrate the first part of D'Avenel's findings on inequality.

"The conclusion of Mr. d'Avenel's study, "is that there is *not a single rentier* in our country who is centuries old. The rentiers of the time of St. Louis, those of the time of the English wars, those of the time of Francis 1st, are all more or less reduced to misery. By force of circumstance alone, they have been slowly and irretrievably stripped. All the fortunes are recent and have their origin in the work and industry of their present owners, or the fathers, grandfathers and at most the great-grandfathers of their present owners. The rich getting richer, and the poor getting poorer. Yet another socialist legend that falls before the facts. *Journal des Économistes*, 1892, Juillet Septembre, Volume 102 - Page 210.

For this crucial question of inequalities, d'Avenel also studied contemporaneous data. In a chapter devoted to Military Salaries, Remuneration of Magistrates and Priests (Histoire, tome V published in 1907 but completed in 1892), he introduces some considerations on the distribution of incomes relegating the measure of the aggregated wealth in a very dense appendix. He approximates the wealth of each classes using the statistics of the yearly flow of inheritances which he multiplied by 35, a low approximation of the intergenerational time interval. The statistician de Foville used the same methodological principle found in 1894 that the whole private wealth was around 225 billion, d'Avenel found 174 billion. Several reasons explain the discrepancy between d'Avenel's and de Foville's estimations. The first is eager to propose figures that could not be considered as exaggerated. First d'Avenel took 35 instead of 36 to estimate the generation length but the major difference originates in the treatment of the donations. d'Avenel stuck only to the inheritances, probably in order to focus on homogeneous data while De Foville insisted that:

We are careful to add donations to successions here because donations are, strictly speaking, only a derivation of this current of inheritance, the total importance of which we have to measure. Most inter vivos gifts can be considered as anticipated legacies or advancements in inheritance: they are usually parents who endow their daughters, establish their sons, etc.

Such a difficulty of measurement is still in question today. While some criticisms have been made on Piketty analysis due to the increase of the single household among the poorest biasing the comparison, d'Avenel was aware of this kind of effect stressing that among the richest the chance to have the two inheritance was higher (ref??). Once the national wealth level determined, d'Avenel deduces some original conclusions on the concentration of wealth among the various classes he distinguished:

The other half of French wealth - 45 per cent - belongs to less than one hundredth of the nation: 95,600 families alone own 78.5 billion. And, among these rich people, the shares are quite different; at 54,000 of them - having from 250,000 to 500,000 francs - it only falls due for a total of 19.5 billion francs; while the 1,045 lords of fortunes greater than 5 million are together wealthy by about 14 billion (Histoire, V, p. 83)

D'Avenel did not bother his readership with the technical subtleties of the Pareto law but uses a striking device to illustrate the concentration by focusing on the top 1% and the top 1‰. According to our best knowledge, Lorenz (1905) dealing with the bottom 1% but no other author focusing on the top 1%. This device was not re-used before the NBER introduced the 1% statistics at the end of the 30's. This early work on inequalities was mentioned by Cameron (1958). It is noteworthy that d'Avenel pinpoints not only the top 1% but also the top 1 ‰ emphasizing that the social pyramid has not a regular form but has a tapered form. The publication of d'Avenel was released after Pareto's *Cours* devoted to the distribution of wealth D'Avenel's figures support perfectly the development of Pareto on the shape of the social "pyramid".

Another original topic investigated by d'Avenel was the human capital.²² The notion and attempts of quantification of human capital were not new in late 19th France. De Foville (1890) for instance estimates at 15 billions gold France the revenues produced by the French human capital in 1889. In 1894, Georges d'Avenel analyses the "human society" using a theory of "personal capital" distinguishing stockholders and

²² D'Avenel also explicitly used the term human capital when speaking about the revenues of liberal professionals (doctors, lawyers, artists, writers). As he clearly explained (Avenel, 1894, vol.5: 152):It looks like the industrialists and merchant in this: he invest his human-capital as 'shareholder of life', thus he is exposed to more chance good or bad than the fixed income of civil servant of any rank.

bondholders of life (d'Avenel, 1894 vol.5: 124-125):

Human society, viewed through the lenses of the interests, consists in 'shareholders' and 'bondholders'. All human beings, without exception, perhaps without knowing it (...), own capital and invest in it. Some have acquired or inherited *material* capital (money, land, any property), all receive by birth, the *personal* capital (strength, intelligence, various faculties).²³

He assumes that this *personal capital* is more important than the material one, because without the latter the former would not develop very far. First, he evaluates that this capital generates the two thirds of the revenues of France at that time (d'Avenel provides an estimation of the different kinds of revenues coming from human labor and compares it to the return of the assets of the nation.²⁴). Second, 'among all peoples and all times, those with personal capital end up gradually acquiring all the material capital of those peoples lacking a correct level of personal capital.' (Avenel, 1894, vol. 5: 125).

D'Avenel uses this theory to study wages and incomes of various professions and types of labour over 1200-1800. D'Avenel (1894, vol. 5: 125) explains that according to the periods, different components of this human capital can be more or less valued: physical force in the medieval period or financial expertise at the end of the Ancien Regime. He implicitly assumed that the incentives built in the society (depending on various factors, from technology to institutions) helped in explaining which type of talents will be valued more than others.

What is also remarkable is that d'Avenel followed the same journey that what will be done few decades by the Annales, went from history of prices to the history of mentalities. The end result of the studies of d'Avenel, the changes in ways of life, have

²³ La société humaine, observée sous l'angle des intérêts, se compose d' « actionnaires » et d' « obligataires. » Tous les humains, sans exception, et peut-être sans le savoir, comme M. Jourdain pour la prose, possèdent un capital et le font valoir. Quelques-uns ont acquis ou hérité le capital matériel (argent, terres, biens quelconques) ; tous reçoivent en naissant le capital personnel (force, intelligence, facultés diverses).

²⁴ Le revenu du capital placé n'est en effet qu'une partie, et la moindre, des recettes générales de la nation : les 12 milliards de salaires, de gages ouvriers et agricoles, les 3 à 4 milliards de bénéfices annuels des patentés du commerce et de l'industrie, les 2 à 3 milliards d'appointements des fonctions publiques ou privées et d'honoraires des professions libérales, font, chaque année, une somme double certainement des 9 milliards d'intérêt que rapportent les biens mobiliers et fonciers. D'Avenel (1894, vol. 5: 84).

interested sociologist as he was a forerunner in such identification. He advocates his method as follow :

The figures would only be a meaningless statistic if we did not specify the facts that these signs reveal to us and the laws that derive from them. Thus, in our view, the history of figures becomes the largest part of human history: that of their interests, of their private lives; the rest, public history, being of lesser consequence, although it appears more so. If it is true that today's richest people are much richer, and above all much more numerous, than those of the past, what is the reason for this? How did this happen? What does this prove and what should result? What mean wealth?

A central claim of d'Avenel was that technical progress allowed an equalization of "enjoyments" (an economist would say utility) without equalization of revenues. (*Les enseignements de l'histoire des prix*)

According to an admirer d'Avenel wields "statistics like an engineer, caprices like a caricaturist, motives like a sociologist, and recollections like an historian." (quoted by Rosalind Williams, 1982: 95). In his major work, D'Avenel was eager to avoid any theoretical debate with the economists²⁵, but when he turned his attention to the evolution of large fortunes, or the mass consumption he could not escape to discuss some tenets of the neoclassical economists. Kenneth Arrow has summarized very clearly the methodological approach of mainstream economics since the 1870's

In the usual versions of economic theory, each individual makes decisions to consume different commodities, to work at one job or another, to choose production methods, to save, and to invest. In one way or another, these decisions interact to produce an outcome which determines the workings of the economy, the allocation of resources in short. It seems commonly to be assumed that the individual decisions then form a complete set of explanatory variables. A name is even given to this point of view, that of methodological individualism, that it is necessary to base all accounts of economic interaction on individual behavior.(Arrow, 1994, p. 1)

²⁵ Nevertheless he compared his results with those of say Leroy-Beaulieu or de Laveleye (esp. in *Histoire*, vol.1)

In his two books, "The Mechanism of Modern Life" and "The equalization of enjoyments" D'Avenel develops a theory of consumption emphasizing the social dimension of consumption totally at variance with the neoclassical approach. He demonstrates over and over how ordinary citizens of his own day enjoy a material life that only the very rich of the past were able to obtain. The consumer revolution had toppled that barrier. In his article on porcelain, for example, d'Avenel describes how Frenchmen from millionaire to peasant eat out of the same dish while porcelain was reserved to the elites few centuries ago, same is true for factory made rugs, wallpapers, silk dress... Sociologist retained that these products offer the illusion of the wealth. Even if d'Avenel recognized the lowest quality of these mass-products he claims that technology makes possible an "equalization of enjoyments" without a corresponding "equalization of incomes."

Since the enjoyments become similar, what does wealth allow? To own rare thing and to have more than others. In the "Mechanism" series d'Avenel often reminds his readers that wealth consists of the ability to possess, not beautiful or comfortable things, but rare ones (Williams 1982). D'Avenel is by some aspects similar to Veblen's one but he went farther in establishing some links between his analysis of inequality and consumption:

"If the mass of citizens does not appear to appreciate the ... new enjoyments with which the nineteenth century has endowed it, it is because the "money question" is not a question of enjoyment, but one of equality; a matter of self-respect and not at all one of pleasure. "To have money," isn't it basically "to have more money than others?""

With this admission collapses the theory of social harmony through the leveling of enjoyments. D'Avenel looks too much at the objects people own and not enough at the flesh-and-blood owners-at the differences in their mortality, education, health, manners, taste, social contacts, leisure, and social and political power (Williams, 1982 :231).

D'Avenel described accurately the changes in consumption patterns induced by mass consumption and the diffusion of luxury goods to mass population at the turn of the centuries which largely escaped to mainstream economists. His analysis of the consumer behavior are far ahead of Duesenberry's Income, Saving and the Theory of

Consumer Behavior”, a book not widely reviewed at the time of its appearance in 1949 (see Mason 2000). D’Avenel’s analysis of consumption is devastating of mainstream economics as he denies that there is “needs” preexisting to social life.

What in itself is not natural is what we call our needs. Those which seem to us of first necessity, are all artificial, most of them were unknown formerly and are still unknown on the three quarters of the globe, where the inhabitants remained closer to nature. We find it "natural" to have plates, socks and shoes and to travel in a country crisscrossed by roads. We are wrong, these are very extraordinary inventions. (Le nivellement des jouissances, RDDM, 1909)

7. Conclusion

D’Avenel was an original public figure of his time. This original personality is well reflected in his work. Despite some success among the general public, he was highly criticized by historians but received early consideration by economists. He was well aware of his singularity comparing his way of writing history to the new novels (literary realism) introduced by Stendhal and Maupassant:

The novelist of yesterday chose and told the crises of life, the acute states of the soul and the heart, the novelist of today writes the history of the heart of the soul and the intelligence in its normal state. In the same way, I would say in my turn, is there a "history of the *Faits Divers* (journalists spotlights)" and a "history of the *Faits constants*?" (Introduction, Découvertes d’histoires sociales)

One century later, after the success of the Annales school and the development of the quantitative economic history, d’Avenel appears as a crucial precursor. He provided series that are still used today but also adopted a quantitative approach of historical problems that is now shared by many economic historians and introduced theories on economic life that appear very modern. Beyond his pioneer work in quantitative history, he took a deconstructionist approach on several topics that are still now in debates such as the property of land, the place of women in the society and the role of institutions for human welfare.

Toulouse, September 2021, 27th.

Bibliography

Arrow Kenneth J. 1994. Methodological Individualism and Social Knowledge, *The American Economic Review*, May, 1994, Vol. 84, No. 2, Papers and Proceedings of the Hundred and Sixth Annual Meeting of the American Economic Association (May, 1994), pp. 1-9

Avenel, G. d'. (1878). *Les Évêques et archevêques de Paris depuis Saint Denys jusqu'à nos jours. Avec des documents inédits*. Tournai.

Avenel, G. d'.. (1881). *Les Octrois en France et à l'Étranger*. Paris: Guillaumin.

Avenel, G. d'. ([1884] 1895). *Richelieu et la monarchie absolue: Tome 1*. (Le roi et la constitution ; la noblesse et sa décadence.) Paris: Plon.

Avenel, G. d'. ([1884] 1895). *Richelieu et la monarchie absolue: Tome 2*. La noblesse et sa décadence (suite) ; administration générale, finances. Paris: Plon.

Avenel, G. d'. ([1887] 1895). *Richelieu et la monarchie absolue: Tome 3*. Administration générale (suite), armée, marine et colonies, cultes, justice. Paris: Plon.

Avenel, G. d'. ([1887] 1895). *Richelieu et la monarchie absolue: Tome 4*. Administration Générale, Justice (Suite Et Fin), Administration Provinciale Et Communale, Paris: Plon.

Avenel, G. d'.(1890). 'La Réforme Administrative. III Les Cultes', *La Revue des deux mondes*, 15 May, pp. 332-69.

Avenel, G. d'. (1892a) La fortune mobilière dans l'histoire: I. Le pouvoir de l'argent, *Revue des Deux Mondes*, Troisième Période, Vol. 110, No. 4 (15 Avril), pp. 820-847

Avenel, G. d'. (1892b) La fortune mobilière dans l'histoire: II. Les monnaies et le taux de l'intérêt, *Revue des Deux Mondes*, troisième période, Vol. 111, No. 4 (15 Juin), pp. 782-817

Avenel, G. d'. (1892c) La fortune mobilière dans l'histoire: III. Le crédit et la ruine des anciens capitalistes, *Revue des Deux Mondes*, troisième période, Vol. 112, No. 3 (1er AOUT 1892), pp. 582-613

Avenel, G. d'. (1893) CHRONIQUE DE LA QUINZAINE, *Revue des Deux Mondes*, TROISIÈME PÉRIODE, Vol. 117, No. 4 (15 JUIN), pp. 945-955

Avenel, G. d'. (1893) La Propriété foncière de Philippe Auguste à Napoléon, *Revue des Deux Mondes*, 3e période, tome 115, 1^{er} janvier, (p. 99-130).

Avenel, G. d'. (1896). Correspondence: *The English Historical Review*, Vol. 11, No. 43 (Jul.), 609-611

Avenel, G. d'. 1910a. *Découvertes d'histoire sociale, 1200-1910*. Paris : Flammarion.

Avenel, G. d'. 1910b. *Les Français de mon temps. Introduction par Charles Sarolea*. Paris: Nelson

Avenel, G. d'. (1918), Les nouveaux riches, *Revue des Deux-Mondes*, 15 juillet 1918.

- Avenel, G. d', 1918, « La France économique après 1815 », *Revue hebdomadaire*, VII, 3, p. 281-297.
- Avenel, G. d'. (1919). *L'évolution des moyens de transport: Voyageurs, lettres, marchandises*. Paris: Flammarion.
- Avenel, G. d' (1920). *Découvertes d'histoire sociale, 1200-1920*. Paris: Flammarion.
- Avenel, G. d' (1921a). L'église Française: Après Quinze Ans de Séparation: I: Le Clergé *Revue des Deux Mondes*, (Sixième Période, Vol. 64, No. 4 (15 Août 1921), pp. 820-847
- Avenel, G. d' (1921b) L'église Française: Après Quinze Ans de Séparation: I: Les Fidèles, *Revue des Deux Mondes, Revue des Deux Mondes*, (Sixième Période, Vol. 65, No. 1 (1er SEPTEMBRE 1921), pp. 137-151.
- Avenel, G. d' (1925). *Les enseignements de l'histoire des prix*. Paris: Payot.
- Avenel, G. d' (1894-1926) Histoire économique de la propriété, des salaires, des denrées et de tous les prix en général depuis l'an 1200 jusqu'en l'an 1800. 7 Volumes, Paris : Impr. nationale : [puis] E. Leroux.
- Académie des sciences morales et politiques, Séances et travaux, 1882, pp.
- Alcouffe, A. (1989), The Institutionalization of Political Economy in French Universities: 1819–1896, *History of political economy*, vol. 21, issue 2, 313-344.
- Avezou, Laurent. *Raconter la France. Histoire d'une histoire*, A. Colin, 2008.
- Benjamin, W., Eiland;H., McLaughlin, K. (2003). *The arcades project*. Cambridge: Harvard University Press.
- Beveridge, W.H. (1965) « Preface » in *Prices and wages in England from the twelfth to the nineteenth century. Vol. 1 : Price Tables : Mercantile Era*, W. H. BEVERIDGE (ed.), 2e éd., London, Cass.
- Boyer, M. N. (1963) Travel Allowances in Fourteenth-Century France. *Journal of Economic History*, Vol. 23, No. 1 (Mar., 1963), pp. 71-85
- Braudel, F. (1988), *L'identité de la France*, Volume 2, Part 2
- Braudel, F. (1990). *Afterthoughts on material civilization and capitalism*. Baltimore, MD: Johns Hopkins University Press.
- Bruegel, M. (2001) A Bourgeois Good? Sugar, Norms of Consumption and the Labouring Classes in Nineteenth-Century France. In P. Scholliers (ed.) *Food, Drink and Identity: Cooking, Eating and Drinking in Europe since the Middle Ages*
- Cameron, R. E. (1958) Economic Growth and Stagnation in France, 1815-1914, *Journal of Modern History* 30.1: 1-13.
- Castelot E. (1896), Review of d'Avenel, 1894, *Revue Historique*, T. 61, Fasc. 1 pp. 128-132.
- Chappey Jean-Luc and Guillaume Lancereau. 2018., L'histoire à l'épreuve du feu, *Revue d'histoire des sciences humaines*, 33, 107-128.

Chance, W. A. (February 01, 1966). A Note on the Origins of Index Numbers. *The Review of Economics and Statistics*, 48, 1, 108-110.

Charney, L., Schwartz, V. R. (1996) *Cinema and the Invention of Modern Life*. University of California Press.

Chatelain, E. (1911) Introduction à l'étude d'un problème de répartition. Variation de la part du capital et de celle du travail dans un revenu total croissant. *Revue d'Économie Politique*, 25.1 :28-47.

Chaunu, P. (1978). *Histoire quantitative, histoire sérielle*. Paris: Colin.

Crandall (1964), « The International Scientific Committee on Price History », *The Journal of Economic History*, 24.3, pp. 381–388.

Daumard, A. (1980) La bourgeoisie française aux temps des épreuves. In Labrousse, E., Braudel, F. (ed.) *Histoire économique et sociale de la France*, t. IV. Paris : PUF, pp. 861-906.

Daudet, Leon. 1914. *Fantomes et Vivants: Souvenirs des milieux littéraires, politiques, artistiques et médicaux de 1800 a 1905*. Paris: [s.n.].

Demade, J. (2011). Produire un fait scientifique : La méthodologie de l'histoire des prix entre structures académiques et enjeux intellectuels (milieu XIXe - milieu XXe), *Working Paper*, Université Paris I., http://halshs.archives-ouvertes.fr/docs/00/68/84/47/PDF/Demade_2-2.pdf

Dutu, R. (2004). Moneychangers, Private Information and Gresham's Law in Late Medieval Europe. *Revista De Historia Económica / Journal of Iberian and Latin American Economic History*, 22(3), 555-571.

Febvre, L. (1932). « Chiffres faux, courbes vraies ? », *Annales d'histoire économique et sociale*, 4.18, p. 585–586. http://www.persee.fr/web/revues/home/prescript/article/ahess_0003441x_1932_num_4_18_1363

Fisher, Irving. 1911. *The purchasing power of money; its determination and relation to credit, interest and crises, by Irving Fisher ... assisted by Harry G. Brown*. New York. <http://hdl.handle.net/2027/uc2.ark:/13960/t4dn4f37s>.

Fisher, D.H. (1996) *The Great Wave: Price Revolutions and the Rhythm of History*

Fourquet, F. (1989). *Richesse et puissance: Une généalogie de la valeur, XVIe-XVIIIe siècles*. Paris: La Découverte.

Foville, Alfred de. 1890. *La France économique: statistique raisonnée et comparative. Année 1889 Année 1889*. Paris: Armand Colin.

Foville, A. (Dec., 1893), The Wealth of France and of Other Countries, *Journal of the Royal Statistical Society*, Vol. 56, No. 4 pp. 597-626 (translated from Léon Say, 1893)

Foville, A. (1907). *La monnaie*. Paris: Lecoffre.

Friggit, J. (2012). Évolution du prix de l'immobilier d'habitation de 1936 à 2012 en France et de 1200 à 2012 à Paris. Report, Ministère de l'écologie et du développement durable.

- Frisch, Ragnar (1927) *The Analysis of Statistical Time Series*. New York. Unpublished mimeo.
- Gide, C. (1895) Review of d'Avenel (1895), *The Economic Journal*, Vol. 5, No. 19 (Sep.), 406-410.
- Gide, C. (1907). Economic Literature in France at the Beginning of the Twentieth Century, *The Economic Journal*, Vol. 17, No. 66 (Jun., 1907), pp. 192-212.
- Hauser, H. (1910) Review: Les riches depuis sept cents ans. Histoire économique de la propriété, des salaires... et de tous les prix en général depuis l'an 1200 jusqu'à l'an 1800. Tome V by G. d'Avenel, *Revue Historique*, T. 104, Fasc. 1 (1910), pp. 156-159.
- Hauser, H. (1936) Recherches et documents sur l'histoire des prix en France de 1500 à 1800. Comité scientifique international pour l'histoire des prix.
- Hauser, H. (1944). *La pensée et l'action économiques du Cardinal de Richelieu*. Paris: Presses Universitaires De France,
- Hoffman, P.T., Jacks, D.S., Levin, P.A., Lindert, P.H. (2002) Real Inequality in Europe since 1500, *Journal of Economic History*, Vol. 62, No. 2: 322-355
- Jacoby, H. (1973) *The bureaucratization of the world*. Berkely: university of California Press.
- Juglar, C. (1862). *Des Crises commerciales et leur retour périodique en France, en Angleterre et aux États-Unis*, Paris : Guillaumin.
- Kendall, M. G. (January 01, 1969). Studies in the History of Probability and Statistics, XXI. The Early History of Index Numbers. *Revue De L'institut International De Statistique / Review of the International Statistical Institute*, 37, 1, 1.
- Krulic Brigitte 2010, Lectures républicaines de la Raison d'État : l'affaire Dreyfus, in B. Krulic (éd.), *Raison(s) d'Etat(s) en Europe: Traditions, usages, recompositions*. Bern :Lang, p. 102-26.
- Hirata, J. (2011). *Happiness, ethics and economics*. London: Routledge.
- Kettani, Assia (2010), De l'histoire à la fiction : les écrivains français et l'affaire Dreyfus, PhD Université de la Sorbonne Nouvelle (Paris) <https://tel.archives-ouvertes.fr/tel-00860862> .
- Labrousse, E. (1932), *Esquisse du mouvement des prix et des revenus en France au XVIIIe siècle*. Paris : PUF.
- Lavoisier, A.-L. (1791), *De la richesse territoriale du royaume de France*, Paris : Imprimerie Nationale.
- Leber, C. (1847). *Essai sur l'appréciation de la fortune privée au Moyen âge, relativement aux variations des valeurs monétaires et du pouvoir commercial de l'argent*. Paris Guillaumin.
- Leroy-Beaulieu, Paul. *Essai sur la Répartition des Richesses et sur la Tendance à une Moindre Inégalité des Conditions*. Paris: Guillaumin & Cie, 1881.
- Levasseur, E., (1858). *La question de l'or*, Paris : Guillaumin.

- Levasseur, E. (1867). *Histoire des classes ouvrières en France depuis 1789 jusqu'à nos jours*: Paris: Hachette.
- Levasseur, E., (1892). Rapport sur deux concours pour le prix Rossi proposés pour l'année 1892. 1° Histoire économique de la valeur et du revenu de la terre du XIIIe siècle au commencement du XVIIe, 2° Histoire économique de la valeur et du revenu de la terre, au XVIIe et au XVIIIe siècle, in *Séances et travaux de l'académie des sciences morales et politiques*, Compte Rendu, 2^e semestre, pp. 349-419.
- Liesse, André. 1914. "Notice sur la vie et les travaux de M. Emile Levasseur," *Séances et travaux de l'Académie des sciences morales et politiques*, pp. 338-61.
- Lorenz, M. O. (1905) *Methods of Measuring the Concentration of Wealth*. Publications of the American Statistical Association, Vol. 9, No. 70 pp. 209-219
- Louçã, F. (1998) *The Years of High Econometrics: A Short History of the Generation that Reinvented Economics*, London: Routledge.
- Lugnier, Antoine. 1962. *Cinq siècles de vie paysanne à Roche-en-Forez, Loire, 1440-1940*. Saint-Etienne: Dumas.
- Marczewski Jean Quelques observations sur l'article de Monsieur Chaunu Cahiers Vilfredo Pareto T. 2, No. 3 (1964), pp. 177-180
- Marczewski, J. (1965). *Introduction à l'histoire quantitative*. Genève: Librairie Droz.
- Mason Roger, 2000. The Social Significance of Consumption: James Duesenberry's Contribution to Consumer Theory, *Journal of Economic Issues*, Sep., 2000, Vol. 34, No. 3 (Sep., 2000), pp. 553-572
- Mazarin, J., Chéruel, A., & Avenel, G. . (1893). *Lettres du cardinal Mazarin pendant son ministère*: 7. Juillet 1655-Juin 1657. Paris: Imprimerie nationale.
- Mazarin, J., Chéruel, A., & Avenel, G. . (1894). *Lettres du cardinal Mazarin pendant son ministère*: 8. . Juillet 1657- août 1658. Paris: Imprimerie nationale.
- Mazarin, J., Chéruel, A., & Avenel, G. . (1906). *Lettres du cardinal Mazarin pendant son ministère*: 9. août 1658-mars 1661. Paris: Imprimerie nationale.
- Mitchell, W. C., & United States. (1915). *Index numbers of wholesale prices in the United States and foreign countries*. Washington, D.C: Govt. Print. Office.
- O'Brien, P. (1983) The Kleptomania Diagnosis: Bourgeois Women and Theft in Late Nineteenth-Century France, *Journal of Social History* 17.1: 65-77.
- Pareto, V. (1896, 1897), *Cours d'économie politique*,
- Phelps Brown, Henry, and Sheila V. Hopkins. 1981. *A perspective of wages and prices*. London: Methuen.
- Proust, M. (1920). *A la recherche du temps perdu*. Tome III Le coté Guermantes, Paris, Gallimard.
- Rimbaud J. (1909). *Histoire des doctrines économiques* (p. vi-816).

- Ridolfi Leonardo, Six Centuries of Real Wages in France from Louis IX to Napoleon III: 1250–1860, *Journal of Economic History*, Volume 79, Issue 3, September 2019 , pp. 589-627.
- Rogers, T. (1866–1902), A History of Agriculture and Prices in England from 1259 to 1793 7 vols)
- Rogers, J. E. T. (1894). Six centuries of work and wages: The history of English labour. London: Swan Sonnenschein and Co.
- Rogers, J. E. T. (1921). The economic interpretation of history: Lectures delivered in Worcester college hall. Oxford, 1887-8. London: T. F. Unwin, Ltd
- Sauvy, A. (1952). Variations des prix de 1810 à nos jours, *Journal de la société statistique de Paris*, tome 93 p. 88-104
- Say, Léon. 1889. *Dictionnaire des finances*. Paris: Nancy.
- Seillère, E., (1939). Georges d’Avenel Historien et Moraliste. *Revue des Deux-Mondes*, 53, pp. 443-455.
- Siegfried, A. (1913) *Tableau politique de la France de l’ouest sous la troisième république*. Paris : A. Colin.
- Shaw, A. M. (1896) Review of *Histoire Economique de la Propriété, des Salaires, des Denrées et de tous les Prix en général depuis l’An 1200 jusqu’en l’An 1800*. *English Historical Review* 11.41 :123-129.
- Tendler, J. (2013) *Opponents of the Annales School*. London: Palgrave.
- Tiersten, L. (2001) *Marianne in the Market. Envisioning Consumer Society in Fin-de Siècle France*, Berkeley, University of California Press, 2001
- Turgot, *Œuvres de Turgot et Documents Le Concernant. Vol. IV. Turgot, Ministre, 1774-1776* (Schelle. F. Alcan (Paris, 1913).
- Tooke T. (1838). A History of Prices and of the State of Circulation. London : Longman.
- Usher, A. P. (1928) Reviewed Work(s): *Histoire de la Fortune Française: la Fortune Privée à travers Sept Siècles*, *American Historical Review*, Vol. 34, No. 1, pp. 106-108.
- Usher, A. P. (1926) Supplement, Papers and Proceedings of the Thirty-eighth Annual Meeting of the American Economic Association *American Economic Review*, Vol. 16, No. 1, pp. 265-280
- Usher, A. P. The General Course of Wheat Prices in France: 1350-1788, *Review of Economics and Statistics*, Vol. 12, No. 4 (Nov., 1930), pp. 159-169.
- Valade, B. (1990) Pareto. La naissance d’une autre sociologie. Paris : PUF.
- Vapereau, G. 1893. *Dictionnaire universel des contemporains & supplément*. Paris: Hachette.
- Vène, A. (1942) Statistiques et méthodes économiques. Controverses récentes sur le mouvement des prix, *Journal de la société statistique de Paris*, tome 83 (1942), p. 135-151.
- Wailly, Natalis de (1857). *Mémoire sur les variations de la livre tournois depuis le règne de Saint Louis jusqu’à l’établissement de la monnaie décimale*, Paris : imprimerie royale, 1857

Walras, L. (1884). « Monnaie d'or avec billon d'argent régulateur », Principes proposés à la conférence monétaire internationale pour la prorogation de l'Union Latine, *Revue de droit international et de législation comparée* vol 16, n° 6, p 575-588. Auguste et Léon Walras Œuvres économiques complètes, X.

Watkins, G. P. *The growth of large fortunes; a study of economic causes affecting the acquisition and distribution of property*. Thesis presented to the University Faculty of Cornell University for the Degree of Doctor of Philosophy. Reprinted from the Publications of the American Economic Association, November, 1907 ; in its monographs, Third Series, Vol. VIII, No. 4.

Williams, R. H. (1982). *Dream worlds: Mass consumption in late nineteenth-century France*. Berkeley: University of California Press.

Yon, J-C., (2010). *Histoire culturelle de la France au XIXème siècle*. Paris, Armand Collin.