Performing physiocracy: Pierre Samuel Du Pont de Nemours and the limits of political engineering

PERFORMING PHYSIOCRACY.

Pierre Samuel Du Pont de Nemours & the Limits of Political Engineering

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Abstract:

The story of Pierre Samuel Du Pont de Nemours has often been described as one of success. The man was a well-known statesman, economist and entrepreneur in late eighteenth century France and his main legacy, the famous and still thriving Du Pont company, suggests a brilliant trajectory. The aim of this paper, however, is to analyze Du Pont's failure in performing the political and economic doctrine he was an active promoter of all along his life: physiocracy. In all of his very diverse activities, be they scientific, political, or entrepreneurial, Du Pont indeed deliberately attempted to enact this original liberal doctrine. He tried, along with fellow physiocrats, to introduce freedom of trade and enterprise in Old Regime French minds and economic practices. Later, when emigrating to the United States, he devised a plan for a physiocratic colony. But none of these ventures was actually a success during Du Pont's lifetime: the performation of some of physiocracy's main propositions only came later, in a diffuse and partial way. We contend that this relative failure of performativity can be explained by Du Pont's specific type of agency: one relying mainly on political engineering, based on personal ties and reputations, as well as on a strict distinction between ends and means.

Analyses of the performativity of economics tend to suggest a "convergence" of economies towards a single model, that of the so-called "market economy", which is said to consist in a world of free bilateral exchanges between interested and calculative agencies (Callon, 2007) In this idea lies the more or less explicit "critical" dimension of these analyses, which often intend to fight, by exhibiting it, the supposedly overwhelming power of "liberal" economic theories and theorists. But this argument is weakened by the heterogeneity that one can perceive in the field of contemporary economics, with economists often disagreeing over what theories should prevail, and various theories emerging, and being performed, that contradict the "standard", "orthodox" model. Because of the proliferation of economic literature, the notion of what is "liberal" and what is not has become hard to clarify. In order to circumvent this difficulty, our suggestion here is to look back at the modern origins of liberal economic thought, when liberalism was first explicitly identified. These origins can be found in great part, before Adam Smith, in the physiocratic school of thought[i]. The physiocrats were indeed, in eighteenth century France, the first systematic advocates of "*laisser-faire, laisser-passer*", a creed that they derived from what they were also among the first to call the "new science" of "political economy" (Steiner, 1998a).

The critical perspective thus becomes far more specific. Rather than trying to disentangle analytically a maze of theorists, practitioners and artefacts that would promote and help enact a more or less clearly defined model of the economy, we face a rather small group of people who willingly initiated the historical efforts in favour of the liberty of activity and trade. And they did so not only as "theorists", although the word was starting to emerge in the French language[ii], but also as powerful members of the royal administration, François Quesnay, the father of physiocracy, being a close counselor to king Louis XV. Those who where first called "the Economists" were thus in charge of actual policies, and performing their theories was their intentional goal. Undoubtedly, the most active of them was Pierre Samuel Du Pont de Nemours (1739-1817). The man was a restless promoter of physiocracy: he was a hardworking editor of physiocratic literature, and this is how he came to be the one who coined the word "physiocracy"; but he was also a restless civil servant, who worked for successive *Contrôleurs généraux des finances* (ministries of finance) during his extremely long life; and he participated in numerous business ventures, both in France and the United States of America, where he first arrived on January 3rd, 1800. This paper proposes to tell the story of Du Pont's life, with a focus on his continuously repeated attempts to make physiocracy thrive in practice.

In doing so, we will try to assess the actual power – and limits – of deliberate political action when it comes to performing theories. With Du Pont, we are not only confronted with an "economist in the wild" (Callon, 2007), but also with one that explicitly intended to perform the political and economic doctrine he supported, and this – as we will see – mainly through what may be described retrospectively as "political" means. The performative agency thus took a specific shape in the case studied here, where the "sovereign subject" of action was over-inflated: the pro-physiocratic agency we observe was dominated by a central character – or at least a few ones. What were the consequences of this? Rather paradoxically given how liberalism later flourished, Du Pont's activities seem to have led to repeated "performative failures" (Butler, this issue), at least if – at first – we look at them on a limited timescale. In their lifetime, most of the efforts of the physiocrats to perform their doctrine actually failed, in spite of their tenacity and of the crucial support they sometimes got from a subject as "sovereign" as one can get: the king. Liberalism wasn't born in one day nor through the means they expected. The aim of this paper is therefore to account for the rather surprising inefficiency of the political engineering used by Du Pont and his fellow physiocrats in their performative attempts.

PROLOGUE

Biographical works on Du Pont have been plethoric, but most of them went in either one of two different directions that we intend to combine. Biographies of the "honest man", of the "soldier of liberty" have depicted Du Pont's vivid personality, sometimes brilliantly, as well as his family and statesman's lives, in a way he had inaugurated himself when writing the autobiography of his training years (Du Pont de Nemours, 1906). They have also emphasized tended to make him the indirect founder (through is second son Irénée) of the gigantic DuPont de Nemours & Company chemistry firm, which has been a longstanding symbol of most shifts in economic history over the past two centuries, as a managerially and technologically innovative firm (Chandler & Salsbury, 1971; Lamoreaux & Sokoloff, 2002; Yates, 1989), but also as one relating closely with the Federal state, or developing mass markets (Ndiaye, 2007). Thorough studies of Du Pont's economic writings were also conducted, by historians of economic thought, who were sometimes interested in the man's relationships with other economic and political theorists (Weulersse, 1910). But, strangely enough, even the "economic biography" of Du Pont's life as a businessman that is presented in the ultimate book on Du Pont's economic theories hardly connects these two aspects of the character's trajectory (McLain, 1977). Writings and actions are seldom mixed, and this may explain some interpretation problems, with Du Pont's various biographies contradicting one another on certain points.

But Du Pont, although he had multiple lives, remained all along a particularly coherent character. As an intellectual, he was so coherent that he was even criticized as a man of "system". He also made his acts as adequate as he could to his thoughts, be it as a civil servant or as an entrepreneur. "In short, as Gustave Schelle puts it in the hagiographic tone shared by most biographers of the 'great man', all the acts and all the writings of this thinker were inspired by a constant sentiment, which is nowhere expressed more sincerely: the love of humanity and justice" (Schelle, 1888:3). If one must depart from the hagiography, it is nevertheless difficult not to agree with such an insistence on Du Pont's integrity. The reading of his rich epistolary production reveals how much he made efforts to make his actions fit with his thoughts, and conversely, not only by following whatever vague "constant sentiment", but also by using in practice the intellectual tools he had conceived as a published writer, or by transforming present events into opportunities for renewed reflection on his theories. Letters, as a communication genre, do favour this kind of fit between thought and action, but it needs to be stressed that Du Pont's published writings themselves also interacted closely with his personal experiences. It was the case, obviously, of his *Philosophie de l'univers*, which was written as a reaction to the Terror and which prescribed rules for individual behaviour that Du Pont then tried to obey (Du Pont de Nemours, 1795). It was also the case of his economic writings, that were always in direct touch with what he did and observed as a man of action.

The types of rationality that structure what may be considered as Du Pont's "theoretic" writings have been analyzed elsewhere, Philippe Steiner having shown with much clarity how Du Pont contributed to the emergence of "formally rational" economic knowledge without renouncing a certain "material rationality", that of theories designed for action, especially in the political sphere (Steiner, 1998b). But Du Pont's "action writings" – the legal texts he produced, as well as his letters, prospectuses, and working documents, especially those in which he formulated his business projects – have not been given much attention. These documents take us one step closer to action, as close as one can be to the relation between acting and writing[iii]. We will analyze these texts in their chronological sequence, in order to account for the successive performative efforts made by Pierre Samuel Du Pont de Nemours

all along his life. From the reign of Louis XV to the Restauration, Du Pont indeed changed priorities, starting as a member of the royal administration in the 1760's, but then sailing away from the Directoire to the United States, out of discouragement, in the last months of 1799, with the project to realise physiocracy through business, rather then policy. Failing to do so, he came back to France and civil service as early as 1802, and then only went back to the US for his very last years, in 1815.

DU PONT'S SCIENTIFIC PEDAGOGY

In the early 1760's, Du Pont was looking for a position, after having renounced being a watchmaker – as his father was and wanted him to be – or a doctor – a profession he had trained for but never actually practiced. He had read Vauban and just written a treatise on taxes, thanks to which he managed to get introduced to Quesnay, the father of physiocracy, and became his protégé, before being that of Turgot. This was the beginning, for young Du Pont, of a long carrier at the service of the royal administration, mainly in the Bureau of commerce as General inspector of commerce and manufactures. But it was especially the time of his entry into Quesnay's "writing workshop," (Théré & Charles, 2008) which made him part of a group that its opponents called the "Sect of Economists" because of its intellectual coherence, of its obedience to its master, and of how keen its members were to see their doctrine enacted.

Physiocracy indeed proposed an original conception of the social function of science. It presented human societies as being naturally ordered, ruled by essential laws that would guarantee the happiness of each and everyone. This was made especially clear in Du Pont's synthetic presentation of the physiocratic doctrine, *On the origins and progress of a new science*: "*There is a natural Society, that is anterior to any convention between men, based on their constitution, on their physical needs, on their evidently common interest*" (Du Pont de Nemours, 1768). According to these anti-hobbesian principles, the absence of happiness in society was exclusively due to the adoption of bad conventions by men. The complete satisfaction of needs and interests was indeed possible only if these conventions met certain conditions. The "state of nature" that was described by Du Pont and his fellow physiocrats indeed differed from the one conceived by Rousseau, whose "noble savage" was promptly satisfied. Man does aspire to "enjoyment", i.e. both that of the goods that are necessary to his survival, and that of his fellowmen's company, which includes sexual enjoyment, with its consequences in terms of population growth[iv]. But "*the spontaneous productions of the earth and waters are not sufficient to make a numerous population subsist, nor to provide men with the goods they deserve*" (Ibid.). Hence the necessity for men to be able to "*multiply productions, culture, in order to improve their condition*" (Ibid.). This is where what we would today call the "economic" part of Du Pont's discourse started. He demonstrated that the necessary growth of the "*net product*" of agriculture was made possible by nature, but required that men obey nature's "*essential Laws*", which consisted in the defence of property and liberty, thanks to which men were encouraged to undertake any productive activity and were stimulated in doing so by open competition. As we can see, the science of natural order did not prescribe another world – be it a primitive world, or an under-world – that men had to create entirely from scratch, in opposition to the current world. Physiocracy was only meant to make visible a back-world that was already here. This was one of the meanings of the "*évidence*" that knowledge was meant to have according to Quesnay, followed in this by his disciples, Du Pont being the most fervent of them.

This conception had strong consequences on the relations between science and action. Scientific writing itself became political action. It had to shed light on the practices that had to

be supported for the natural order of production and commerce to actually come into being. And it had to do so in a specific way, so that it could be understood by the right audience. Du Pont was aware of this very early in his author's life, as it appears in the foreword of his first published memoir, *On the exportation and importation of grain* (1764): "*Since truth exists by itself, and since it is in nature,* to demonstrate *doesn't mean anything else than to* show*; and the art of judging is nothing else than the talent to open one's eyes*". Du Pont reached this goal in two ways. First, he developed a concise argumentation, made of a succession of explicitly differentiated and articulated paragraphs that each provided a new argument. Second, he supplied figures to support his ideas. This was an essential element of the intellectual style of physiocratic thought, and one of its main innovations, as it has often been emphasized about Quesnay's *Tableau économique*, first published in 1758 (Quesnay, 1760). Du Pont took over the same method, and designed his own "*Tableau*" to account for "*the effect of the liberty of international commerce of grains, relative to the growth of Agriculture and Revenue*" over ten years (Cf. Figure 1). Without scrutinizing the details of the cash flows depicted in this table, one may notice at first glance that Du Pont made a considerable effort to make these cash flows more easily readable than they were in Quesnay's "zigzag". The cash transfers from one year to the other only appeared in a single and carefully designed column, that of the "*net product caused by the increase in productive advances, depending on the proportion of agriculture in the given year*". Annual lines were therefore easily distinguished, and the distribution of the net product in between the different classes of economic actors was made clear by the separate columns. The demonstrative power of such a presentation was meant to convince its readers, by making their future readable. But who were these readers?

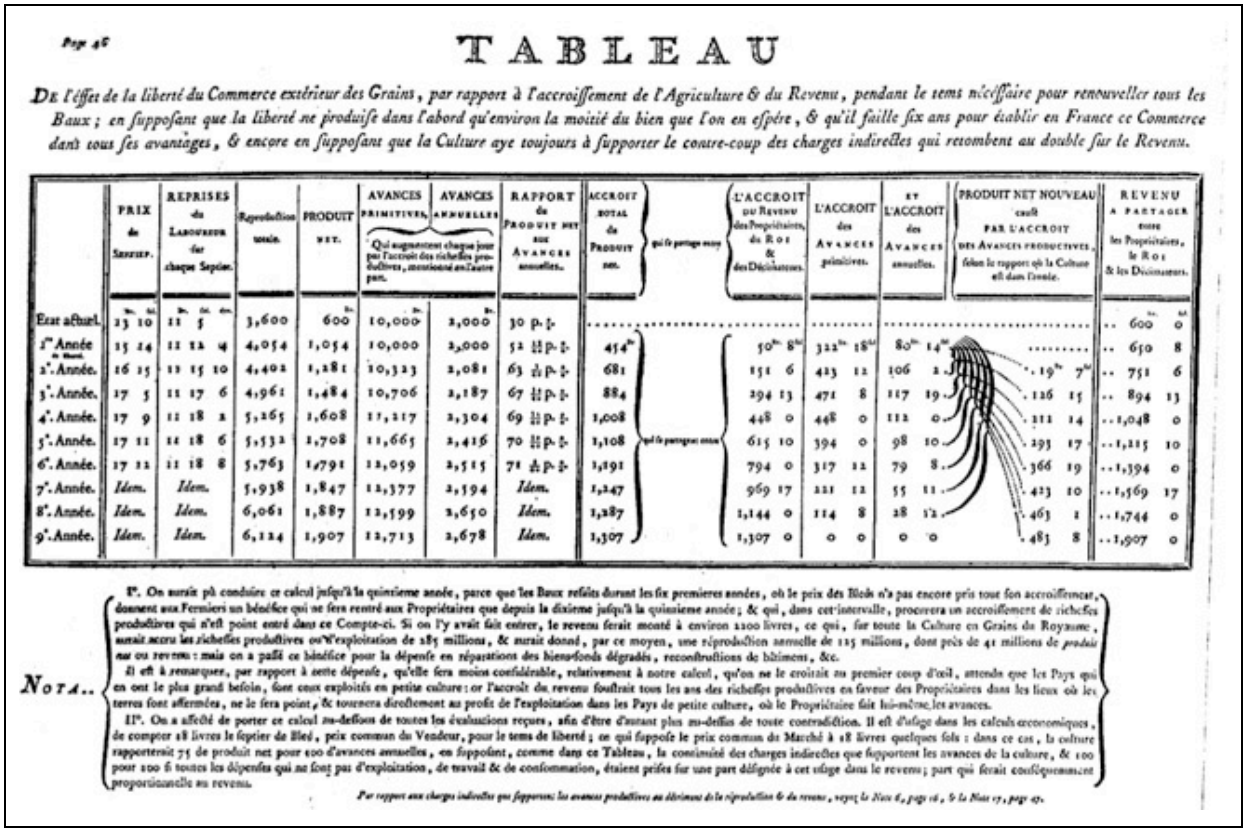

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TABLEAU

De l'effet de la liberté du Commerce extérieur des Grains, par rapport à l'accroiſſement de l'Agriculture & du Revenu, pendant le tems néceſſaire pour renouveller tous les Baux ; en ſuppoſant que la liberté ne produiſe dans l'abord qu'environ la moitié du bien que l'on en eſpère, & qu'il faille ſix ans pour établir en France ce Commerce dans tous ſes avantages, & encore en ſuppoſant que la Culture aye toujours à ſupporter le contre-coup des charges indirectes qui retombent au double ſur le Revenu.

	PRIX du Setier.	REPRISES du Laboureur ſur chaque Semie.	Reproduction totale.	PRODUIT NET.	AVANCES PRIMITIVES, Qui augmentent chaque jour par l'accroiſſement des richeſſes productives, mentionné en l'autre part.	AVANCES ANNUELLES	RAPPORT du Produit net aux Avances annuelles.	ACCROIT TOTAL du Produit net.	qui ſe partage entre	L'ACCROIT du Revenu des Propriétaires, du Roi & des Décimateurs.	L'ACCROIT des Avances primitives.	ET L'ACCROIT des Avances annuelles.	PRODUIT NET NOUVEAU créé PAR L'ACCROIT DES AVANCES PRODUCTIVES, ſelon le rapport où la Culture eſt dans l'année.	REVENU A PARTAGER entre les Propriétaires, le Roi & les Décimateurs.
Etat affuel.	23 10	11 5	3,600	600	10,000	2,000	30 p. ℔.							.. 600 0
1re Année	15 24	11 12 4	4,054	1,054	10,000	2,000	52 ½ p. ℔.	454	qui ſe partagent entre	50 8	322 18	80 14		.. 650 8
2e. Année.	16 15	11 15 10	4,402	1,281	10,323	2,081	63 ½ p. ℔.	681		151 6	423 12	106 2		.. 751 6
3e. Année.	17 5	11 17 6	4,961	1,484	10,706	2,187	67 ½ p. ℔.	884		294 13	471 8	117 19		.. 894 13
4e. Année.	17 9	11 18 2	5,265	1,608	11,217	2,304	69 ½ p. ℔.	1,008		448 0	448 0	112 0		..1,048 0
5e. Année.	17 11	11 18 6	5,532	1,708	11,665	2,416	70 ½ p. ℔.	1,108	qui ſe partagent entre	615 10	394 0	98 10		..1,215 10
6e. Année.	17 12	11 18 8	5,763	1,791	12,059	2,515	71 ½ p. ℔.	1,191		794 0	317 12	79 8		..1,394 0
7e. Année.	Idem.	Idem.	5,938	1,847	12,377	2,394	Idem.	1,247		969 17	221 12	55 11		..1,569 17
8e. Année.	Idem.	Idem.	6,061	1,887	12,599	2,650	Idem.	1,287		1,144 0	114 8	28 12		..1,744 0
9e. Année.	Idem.	Idem.	6,124	1,907	12,713	2,678	Idem.	1,307		1,307 0	0 0	0 0		..1,907 0

NOTA.. I°. On auroit pû conduire ce calcul juſqu'à la quinzieme année, parce que les Baux reſtés durant les ſix premieres années, où le prix des Bleds n'a pas encore pris tout ſon accroiſſement, donnent aux Fermiers un bénéfice qui ne ſera rentré aux Propriétaires que depuis la dixieme juſqu'à la quinzieme année ; & qui, dans cet intervalle, procurera un accroiſſement de richeſſes productives qui n'eſt point entré dans ce Compte-ci. Si on l'y avait fait entrer, le revenu ſerait monté à environ 2200 livres, ce qui, ſur toute la Culture en Grains du Royaume, aurait accru les richeſſes productives ou l'exploitation de 285 millions, & aurait donné, par ce moyen, une réproduction annuelle de 115 millions, dont près de 41 millions de produit net ou revenu : mais on a paſſé ce bénéfice pour la dépenſe en réparations des biens-fonds dégradés, reconſtructions de bâtiment, &c.

Il eſt à remarquer, par rapport à cette dépenſe, qu'elle ſera moins conſidérable, relativement à notre calcul, qu'on ne le croirait au premier coup d'œil, attendu que les Pays qui en ont le plus grand beſoin, ſont ceux exploités en petite culture : or l'accroit du revenu ſouſtrait tous les ans des richeſſes productives en faveur des Propriétaires dans les lieux où les terres ſont affermées, ne ſe fera point, & tournera directement au profit de l'exploitation dans les Pays de petite culture, où le Propriétaire fait lui-même les avances.

II°. On a affecté de porter ce calcul au-deſſous de toutes les évaluations reçues, afin d'être d'autant plus au-deſſus de toute contradiction. Il eſt d'uſage dans les calculs économiques, de compter 18 livres le ſetier de Bled, prix commun du Vendeur, pour le tems de liberté ; ce qui ſuppoſe le prix commun du Marché à 18 livres quelques ſols : dans ce cas, la culture rapporterait 75 de produit net pour 100 d'avances annuelles, en ſuppoſant, comme dans ce Tableau, la contribution des charges indirectes que ſupportent les avances de la culture, & 100 pour 100 ſi toutes les dépenſes qui ne ſont pas d'exploitation, de travail & de conſommation, étaient priſes ſur une part déſignée à cet uſage dans le revenu ; part qui ſerait conſéquemment proportionnelle au revenu.

Par rapport aux charges indirectes qui ſupportent les avances productives au détriment de la réproduction & du revenu, voyez la Note 6, page 16, & la Note 17, page 45.

Image 1 : « Tableau » in Pierre-Samuel Du Pont, *De l'exportation et de l'importation des grains*, 1764, p. 46.

The "*Tableau*" provides first elements of answer to this question. The data it exposed, like those of Quensay's "zigzag", were not macro-economic data, but those of an exemplary farm. The physiocrats addressed first and foremost farmers and landowners, the main recommendation being that the latter should reduce their conspicuous consumption and invest the spared cash in their farms, in order to increase the productivity of these, for their own benefit and that of society as a whole. In order to make this point convincingly, the data were also empirically founded. On the one hand, Du Pont and his fellow physiocrats made good use of the figures provided by journals that prescribed methods of "wise *ménagement*", like the *Journal œconomique*, which was born in 1751. On the other hand, the physiocrats all participated in gathering data from actual farms, thanks to a systematic collection of accounting information in the French countryside, with the notable help of the "Agricultural Societies" that flourished all over the national territory during the period. It was particularly the case in Soissons, where the Society "gather(ed) agricultural memoirs dealing with the county, debating of big culture, and publishing by the end of the Old Regime its own questionnaire (for farmers)" (Perrot, 1978:563). It happened to be precisely in Soissons that Du Pont made his débuts at the service of the royal administration, as an assistant to the local *Intendant* from 1763 to 1765, a period when he came to meet with Turgot – himself the *Intendant* of Limoges – and got more familiar than his urban education had enabled him to be with the operations of French farms. This action of physiocrats towards farms was twofold. Of course, it aimed at improving the empirical adequacy of their theory. But it also participated in the circulation of accounting models in the French countryside. Combined with Du Pont's intense editorial activity in journals such as the *Journal de l'Agriculture* (from 1765 to 1766) and the *Éphémérides du citoyen* (from 1768 to 1772), this peaceful commerce of information was meant to contribute to the hold of physiocratic thought over the "social base" it intended to build upon.

Thanks to their texts and tables, the physiocrats did succeed in disseminating their ideas in certain categories of society and in becoming thus more than a centralised agency. But the actual influence of their well-known doctrine seems to have been quite limited at first. Farmers and other entrepreneurs may have been convinced by the doctrine and the accounting instruments that went with it. But the most powerful category, that of landowners, proved to be difficult to convince through scientific pedagogy and administrative activism. The subtlety of Du Pont's arithmetic argumentation, although it was partly compensated by the greater "simplicity" of some of his fellow physiocrats, made it difficult for his ideas to reach the nobility, that did not manage its estates itself. On top of that, noblemen were not at all supportive of the growing legitimacy given in the nascent bourgeois society to agricultural entrepreneurs, whose contribution to big culture versus small culture was widely acclaimed by the physiocrats (Franklin, 1978). The hope of Quesnay and his followers to see landowners act spontaneously according to their "*well understood interests*" therefore got dimmer and dimmer during the reign of Louis XV, who died in 1774. The deliberate performation of the physiocratic doctrine through scientific pedagogy was a failure in the short run.

DU PONT'S ECONOMIC POLICIES

Luckily enough, or so it seemed, the physiocrats had devised another and possibly more effective mode of action, that Quesnay called "*economic governement*", to perform their theories: the idea was to pass "*positive Laws*" by the mere "*declaration*" of the "*essential Laws of social order*" (Du Pont de Nemours, 1768:§8) described in the physiocratic doctrine. If landowners couldn't be convinced to become reasonable, then it was possible and necessary

to impose some constraints on them so that they be compelled to act more wisely, in their own interest and in that of the kingdom. The dispersed agency of scientific pedagogy could be replaced by a pure exercise of power from the central political authority. The problem, however, was to enforce these laws and not just declare them: the illocutionary force of the sovereign's speech acts and legal texts was far from being unlimited.

While Quesnay was alive, in 1763 and 1764, the promulgation of the Edict of July 19th, 1764 officially "made" grain and flour trade entirely free in all the kingdom except for Paris and its surroundings. "The preambule of the Edict, partly written by Du Pont, who was then working with Turgot, was a real physiocratic profession of faith" (Charbit, 2002:870), the Edict being designed so as "*to animate and extend the culture of land, whose product is the surest source of wealth for a State, to maintain abundance thanks to stores and the arrival of foreign grain, to stop grain from having a price that would discourage the cultivator, to avoid monopoly through the final exclusion of all particular permissions, and through the free and complete competition in commerce; finally maintain in between nations this communication of exchanges between unnecessary items and necessities, which complies so well with the order established by divine providence, and with the views of humanity that must guide sovereigns*" (Cornette, 1993:131-132). But the hopes of performation of their theory by Du Pont and his fellow physiocrats through such means also proved to be deceived. The following year, bad harvests and fears related to a possible increase in the price of bread – which was previously submitted to a strict regulation –, made the enforcement of the Edict difficult. Local parliaments slowed the process down, and the "*judges and police officers (…) issued ordinances that opposed the laws they were meant to enforce*" (Du Pont de Nemours, 1770, cited in Charbit, 2002:871). Declarative law wasn't sufficient for the performation of physiocracy without a disciplined administration that would help make it real throughout the country through constraint.

Similar difficulties occurred from 1774 to 1776, after Louis XVI called Turgot back to office and issued the Edict of September 13th, 1774, which declared once again the entire liberty of commerce. The decision indeed caused flour shortages: it "created an atmosphere of intense speculation, opened new markets for commerce, disorganized production, and raised fear and uncertainty", leading to what has been called the "flour war" (Kaplan, 1976:488). The situation got even more complicated at this point, because of Turgot's simultaneous attacks against the privileges of the nobility, attacks which he considered were made necessary by the terrible situation public finances were in. Finally, the Anglo-French commercial treaty of 1786, for which Du Pont acted both as an "economic counsellor" and a public advocate, under the supervision of *Contrôleur général* Vergennes, met with an unfavourable economic conjuncture as well as with the opposition of a nascent group of promoters of industrial production, led by the Chamber of commerce of Normandy, which was worried that English competition would compromise the industrial development of France (Murphy, 1966; Démier, 1995).

The performation of the physiocratic doctrine as a general system of free trade meant to foster production and satisfaction in the French population therefore appears to have been a difficult task, especially when attempted through such authoritative political means. Du Pont, who was a restless worker, managed to remain a member of the administration until the last years of the Old Regime, working notably with Calonne and Necker during the 1780's. In the 1790's, however, he progressively lost hope in the possible advent of the natural order he had been calling for over the years. His last attempt at performing physiocracy through policy consisted in being a candidate for the Constituent Assembly, where he expected to be able to promote his ideas better. Speaking directly to the representatives of the different classes of population, he would have a chance to make them side with him for some important votes: power derived

from widespread influence, which had to be gained by speaking in the convincing way to the right people. He was indeed elected as a deputy for the bailliage of Nemours in March 1789 and became the President of the Assembly in 1790. The following year, he created a printing shop, both to make a living and to be able to print the texts he wanted to disseminate, including first of all physiocratic pamphlets by himself and other authors – notably Quesnay and Turgot, who had respectively died in 1774 and 1781. He even created a journal a few years later (in 1794), called *L'Historien*, where he could freely express his positions.

However, the Terror, to which he survived only out of luck[v], seems to have definitely turned him away from what we would call today his "economic" preoccupations and the especially the defence of freedom of trade and the promotion of investment in agriculture. According to James McLain, "from this period to the last decade of his life, political thought replaced economic thought as his primary intellectual interest" (McLain, 1977:46). The unstable situation of the French regime would indeed have made the increase of farm production a secondary goal for Du Pont, who mostly focused, from then on, on the promotion of what his master Quesnay had called "*legal despotism*", which was the necessary institutional precondition to the passing of physiocratic laws in favour of trade and agriculture in France. But even that proved difficult in the troubled times the young French Republic was going through. As a member of the Council of ancients from 1795, Du Pont opposed the *Directoire*, which led to his being arrested and imprisoned in 1797 during the Fructidor 18th coup. The printing shop he had created and which was his main source of revenue was ransacked during the events. The situation was so bad that his freedom, wealth and life were threatened.

Under these circumstances, Du Pont's biographic trajectory shifted drastically in 1797: he decided to leave France for the United States of America, with all his family. But the problem in France, as a matter of fact, was less for him the menace against his life and properties, than the contradiction between his political ideals and the way things were evolving on the French scene. Political action as he conceived of it was no more possible for him, and he therefore had no reason to stay (Thompson, 1969), as he explained it to one of his American correspondents in a letter from January 20th, 1800: "*When I took the painful resolution of moving away from my homeland, it was because its Constitution was destroyed, because force reigned instead of Laws, because the Republic wasn't anymore anything more then a word, and because only arbitrary power was actually left instead of* government*. The choice that was left was only between civil war, which is the most horrid of evils, and the cold winter of retreat*". Du Pont therefore resolved to being named by the *Institut National* a "*travelling scholar for a stay in the United States of America*", where he was expected to undertake botanic and agronomic studies… but also planned – once again – to make physiocracy flourish, although through other means than those he had unsuccessfully used until then.

DU PONT'S ENTREPRENEURIAL VENTURE

"*Since, for this mission, the Republic only (gave him) diploma, and no money, (he set up) the means of paying for his trip*", by planning to create an agricultural and commercial company in the United States[vi]. Du Pont's entrepreneurial project was thus at first a project by default, dictated by financial necessity. But he rapidly added positive motivations to the negative ones.

The perspective of moving to the United States was indeed a source of renewed enthusiasm for him. This appears clearly in the dozens of letters he sent from December 1797 to May 1798 to his eldest son, Victor, who was then in Charleston as a member of the consular corps. Du Pont enthusiasm also in the growing width of his project: the necessary amount of capital for his expected settlement in the US was first evaluated at one hundred thousand francs

before rising, only a few months later, to four million. Apprehended through the scope of the descriptions and narrations that had been made by travellers he had met or read, the seemingly virgin American land was deeply attractive to him, allowing him to hope for better days. Finally, Du Pont's admiration for the founding fathers of the United States, as well as for the constitution they had written and about which he had tried to give them his advice (Franklin, 1866; Jefferson, Du Pont de Nemours & Chinard, 1931), contributed to his enthusiasm. He had been impressed by the ideas and personalities of men such as Franklin and Jefferson, whom he had both met during visits they had made to Paris in the previous decades, and he was willing to see them again, as well as the Republic their minds had built. The call of America thus participated in stimulating new hope, for Du Pont as for many others before and after him. The opportunity to reform his homeland was thus widely compensated in his mind by this idea that there was a place on earth where he could undertake radically creative actions, free of constraints.

The man, from then on, was bound to design the future through new means. But he didn't renounce his political and economic ideals. This appears clearly in the project he devised in the last months of 1797, while he was still in France. "*We will do the trade of France, Spain, the West Indies, Mauritius, etc. In the interior, (we will do the trade of) buying and reselling land, education, buying and reselling cattle, salted meats, cheese, butter, etc. The best hopes of the company will be put in this interior commerce of food, because it does not have to fear corsairs and brings back actual money. (…) It seems that we will locate our trading house in Alexandria, our rural house in the counties of Hampshire or (Lardies) in Upper Virginia on the* South Branch *of the* Potowmack"[vii]. As one can see, Du Pont's physiocratic doctrine guided his business action in its overall structure: wealth was meant to come exclusively from the agricultural production of a "*rural house*", but it could not be valued without an intense commercial activity, just as Quesnay had stated it when he counted traders in the "*fertile class*" of population (Steiner, 2000:620). Although he had to act in a new way, Du Pont therefore kept his physiocratic ideals. And he even kept wanting, not only to respect physiocratic principles, but to perform a whole physiocratic economy. Indeed, combining both the businesses he was planning to undertake, Du Pont, who enjoyed turning his name into an adjective, intended to found a real "*Pontian colony*".

From his correspondence, it is possible to date the *Extract of a plan for a rural and commercial operation to be realised in the United States of America* – from which the following excerpts are taken – to as early as November 1797: "*On the outskirts of our lands, we will buy a farm and some cleared up land. This will be the main rural establishment and the head of family operations. We will call land-clearers, and we will make them settle by promising land and cattle. (…) We will immediately raise a lot of cattle, because their education requires few hands (…). We will spread amongst neighbours various rural industries, so that they love us, and to multiply butter, cheese, the preparation of salted and smoked meats, that we will sell either for cash or for other goods. We will establish a* store *in the valley, with all the objects that will be necessary to the everyday life of the land. (…) The 3rd or 4th year we will place a tavern in its most busy part (…). In five or six years, we will establish a school where Virginians will be much more willing to send their children than in Europe (…). On the 7th or 8th year, we will build a perfectly non-flammable house, made of stone, bricks and iron, for the conservation of acts of interest to families, and the various title deeds. This depot will bring to the city founded by the company the constituted authorities. Thus, the main establishment of the company will become the capital city of the county, and maybe one day of the state, the situation of the land, its size, its possible population, and the laws of the country authorizing us to hope so. Then would the prosperity rise to an incalculable level*"[viii]. As one can see, the spatial and temporal scope of the enterprise was

that of a utopia which, over the XVIII[th] century, had become a common place literary genre, closely related to the practice of colony planning that was also thriving at the time (Pacquot, 2007)[ix]. Du Pont *established* on paper a whole, small-scale society, listed its components, articulated them with one another, and thus conceived a complete and efficient social system, that deserved a prosperous future. Such a representation of the future was a real attractor for him: it was because he succeeded in figuring out his America that the potentialities he saw in her became meaningful to his eyes, and could drive his actions[x].

How efficient was this document? Its preparation did contribute to making Du Pont enthusiastic and active, for sure, but it was also destined to other actors, and especially financiers and merchants who could provide capital for the project. Presented in a neater and more definite way in an *Overview of a commercial establishment to be formed in America by the Dupont de Nemours Fathers and Sons & Company*, the plan indeed circulated in 1798 and 1799 among potential shareholders. This version, slightly different from the previous one, notably specified with much more clarity the financial structure of the establishment: "*The society will last for 12 years. It will not be allowed to put together more than 400 shares of 10 thousand pounds each, to form the capital of 4 Millions. Each year, until the liquidation of the society, their will be stock dividend, for the interest of capitals, that will add to the generous benefits of the enterprise. This dividend will amount to 4 per Cent for the 4 first years, 6 per Cent for the 4 following years, and 8 per Cent for the four last. A (unreadable word) of 200 acres will be reserved for every shareholder, per share, at the price of primitive acquisition, and that every shareholder will use how he pleases*"[xi]. Du Pont thus conceived the financial aspects of his plan in a purely calculative way, starting from a minimum dividend that equalled the maximum level long imposed to interest rates in Old Regime France (4 %) (Perrot, 1978). Such a document as this *Overview* seems at first to be a device proposing nothing more than seductive but unfounded promises to those it was destined to, i. e. financiers and merchants that could have been interested in becoming shareholders of the company.

Du Pont did however try to remain relatively prudent, or so it seemed. In his letters to his son Victor, he showed a certain anxiety: he was impatient for his answers and advice, that only reached him in the spring of 1798. In the meantime, Du Pont told his son that: "*(he would) not fix (his) ideas on any of the said points, nor decide on (his) plans before having talked with (him)*", because he felt he was not able to evaluate precisely from France the opportunities offered by the American land[xii]. As for Jefferson, whose protégé he claimed to be, he didn't even dare write to him about his project at first[xiii]. To fight his doubts, and with the help of his second and youngest son Irénée, Du Pont gathered empirical information about American markets, in books[xiv], but also thanks to various stories he had heard through the American he could meet in Paris. These descriptive and quantitative data were for instance the basis of his decision on where to locate his settlement: "*this valley can nourish seven hundred thousand inhabitants and it doesn't count twenty thousand. (…) The still uncultivated earth of this valley is of admirable quality, can cost to the company from only one piaster and a half to three piasters, and be sold for up to eight to ten guineas. (…) The house of commerce destined to vivify the rural establishments will be located in Alexandria. There, it will be less costly than in Philadelphia, closer to the rural establishments, and also adequate for commercial operations. It will be possible when the time comes, to move it to Washington City where we already envisage a few happy speculations on the location of houses, like those that made Franklin wealthy in Philadelphia*". The mix of maps, data and stories that appears in this short extract reveals how much Du Pont tried to present himself as sufficiently knowledgeable about America.

In spite of these efforts, the main guarantees the physiocrat offered for his promises were purely a matter of personal ties and reputations. First of all, trusting the project was trusting Du Pont himself, and this was meant to be encouraged by the fact that he and his family "*(were) known for being protected by Jefferson, vice-president of Congress, and Washington their common friend*". Trust in the project was also meant to be encouraged by trust in its other contributors, whose names were listed as supplementary securities: "*MM. Dupont Father and Sons, his son-in-law Bureau de Pusy, La Fayette, Biderman, Beaumarchais, Johannot, La Tour Maubourg, Adrian Duquesnoy, Rousseau, Bisson Leloup, and Bellefond Bourcard and Fourtaler & Company*". Although some important members of this list finally backed out (e.g. La Fayette and Rousseau), or died before they actually subscribed (e.g. Beaumarchais, however quick an investor he was), the document did enable Du Pont and his son Victor (who had just come back from the US) to raise some capital before leaving France: they gathered a total of about one million francs, out of the four they had planned to get[xv]. It must be underlined, though, that the economy that was thus performed by Du Pont remained not so much one based exclusively on reciprocal economic interests than a truly *political economy*, based on a hierarchical system of relations and reputations that he thought quintessential to the establishment of trust.

The outcome of Du Pont's venture suggests this mode of action didn't allow for success in business. Having landed with his family on the American soil on January 3rd, 1800, Du Pont rapidly discovered, partly thanks to Jefferson – whom he had finally written to –, that the "virgin" lands of Virginia were in fact already subject to an intense speculation, and therefore far too expensive for him to be able to buy any. Furthermore, the law forbade their being bought by a foreign citizen. And, finally, Du Pont admitted that the lands he had dreamed of buying and settling on with fellow Frenchmen weren't really suited for such people: "*The French don't like to travel, except in places where they can find good cooks, gay customs and loose talk*" (cited in Aimé-Azam, 1934:342). The physiocratic utopia could not be. Du Pont therefore chose to limit his activities to their commercial part, and started writing various memoirs, notably *On the commerce of France with the United States* and *On the establishment of ocean liners for the government*[xvi]. His new project indeed consisted, partly, in organising secure maritime liaisons between France and the United States, especially for the benefit of the French government, which for instance included providing supplies for the French Navy in Saint Domingue (Haiti). Du Pont thus went back to his previous speciality, working for governmental actors, and trying to seduce them thanks to a political discourse on the national interest of his project. But the French authorities were not interested the proposals, and Du Pont himself started to complain, from the first months of 1801, about how uninteresting business matters were to him now that his perspectives were deprived of the possibility to create a physiocratic colony. Renouncing progressively his entrepreneurial ambitions, he went back to France in the spring of 1802. His efforts at performing physiocracy from scratch through business enterprise in the US had also failed.

EPILOGUE

As we have shown, what seems to be a real lack of success in the performation of physiocracy may be widely explained by Du Pont's specific performative agency. His actions rarely enabled him to rally the people and things whose participation in his projects seemed necessary: the landowners were reluctant to distribute revenues as he and his fellow physiocrats prescribed; the *Directoire* was more in favour of industry than agriculture, which impeded its receptivity to Du Pont's stance on liberty of activity and trade; financiers were reluctant to only trust his name and not know more about the foundations of his American

project; the American land was hardly adequate to his dreams; etc. In all cases, it seems that Du Pont, along sometimes with his fellow physiocrats, failed to appeal to these people's interests. He always acted, rather, by trying to impose onto others a future he had devised. Forgetting partly about actual conditions and about the dispositions of the people he addressed, he focused instead steadily on his world-to-be. As long as actions were well thought of, i. e. defined deliberately in accordance with the so-called "natural laws", they were bound, in his eyes, to succeed: one just needed to describe them to gain other people's interests and the sovereign subject, guided by physiocracy, could therefore not fail. In Du Pont's eyes, as he confidently told his main shareholder in a letter from the United States where he presented his new projects of maritime commerce, "*mens agitat molem*": mind moves the mass[xvii]. Quoting Virgile's Æneid[xviii], he thus admitted his belief in the capacity of ideas, coming from a unique and divine source, to impose themselves bluntly and simply onto the world. For him, agency was thus, in a way, pre-dispersed into the world: embedded in contexts that only had to be stimulated by a knowledgeable actor to shift the way he wanted. The only problem was that the principles of the "natural" political economy Quesnay had first described proved to be less "natural" to other people, and even made little sense to many of them. Nature had forgotten to expect Du Pont's actions, and physiocracy therefore couldn't emerge through mere political engineering.

The paradox of Pierre Samuel Du Pont de Nemours' story is therefore that it has *not* been remembered as one of failure. This is due mainly to his son Irénée who, having left France for the United States with his father, devised his own business plan as soon as the fall of 1801: he was willing to establish a "*manufacture of sporting and war gunpowder*", following what he had learned while he was the young protégé of famous chemist Antoine Laurent de Lavoisier's at the state-owned company of powders, the "*Régie des Poudres d'Essonnes*", ten years earlier, from 1787 to 1790 (Bret, 1994; Dujarric de la Rivière, 1954; Tronc, 1994). Pierre-Samuel did support his son's project financially but, at the outset, more because of the failure of his own project than out of real enthusiasm. The father was obviously more affectionate with his eldest son Victor (whom he considered a "*child of love*") than with Irénée (the "*child of reason*"), who was not very much into cultivating high-rank connections like his father and sibling were. On top of that, the idea of his son creating a gunpowder manufactory was not a source of great pleasure for a man who had always been a fervent pacifist. Hence, when writing to Jefferson on behalf of his son to recommend his gunpowder for the army, Du Pont only dared speak explicitly of "*sporting gundpowder*" and insisted on the fact that Irénée had been named by his godfather – Turgot – after the greek word for Peace. Finally, the manufacture was nor an agricultural nor a commercial venture, and thus didn't fit very well in the old physiocrat's principles. Even after his first American project had proved unsuccessful, he wrote to friends in France describing Irénée's project as being only the family's eighth in terms of importance. It's performative prospects were too meagre.

Yet, apart from a later period in 1810 when Du Pont momentarily turned against his son with his other shareholders because he believed Irénée should have paid them dividends, Du Pont took on the gunpowder manufactory, which succeeded in surviving and paid most of the bills of the family – although with difficulty – from its launch to Pierre-Samuel's death in 1817. Du Pont endorsed and supported the project out of personal interest, but also, paradoxically, because it may have been the most physiocratic of all the business projects he had ever been involved in. The project was indeed adequate to much of Quesnay's doctrine, although it wasn't so because of Du Pont's influence but much more because of Lavoisier's. The famous chemist, Irénée's teacher, was a proclaimed physiocrat, for whom gunpowder manufacture could foster agricultural production – that of saltpetre, or nitre, the main raw material needed for such a production – just as the trading of grain did (Bensaude-Vincent, 1993; Dujarric

de la Rivière, 1949; Poirier, 1996). Moreover, Lavoisier was like Quesnay a keen follower of Condillac's sensualism, which prescribed a detailed attention to reality, and its accurate measurement whenever possible (Dagognet, 1973). When planning the establishment of his manufacture, Irénée made efforts to anticipate thanks to accounting simulations not only the amount of capital he needed – like his father had done for his own project – but also of the revenues the manufacture could actually yield in the following years. He notably visited other American manufactures in order to do so. Irénée thus performed physiocracy, while conceiving the manufacture, as an entrepreneur intent on measuring reality before making prospective calculations[xix].

The comparison between the two men is quite telling. Contrary to his father, Irénée seldom referred to the doctrine of the "sect". A young, post-Revolutionary man, he also had less connections and no reputation. He therefore had to act in a way different to his father's. Aspiring only to domestic happiness, rather than envisioning the whole political economy, he was compelled to act economically and planned his manufacture step by step, through the close qualitative and quantitative observation of the contexts he wanted to settle in. He engaged into a thorough "enquiry", in the course of which he progressively constructed his action and revised his plans (Dewey, 1938). And he found the tools – for instance synthetic profit and loss statements – that enabled him to do so in his teacher Lavoisier's physiocracy, rather than in his father's. Less of a sovereign subject than Pierre Samuel, Irénée tried to read the potential agency of things and people, comparing for instance closely the powder manufacturing technologies he observed in America with those he had been taught about in France, in order to see on which one he had better to rely. Irénée thus performed physiocracy, but he did so in a very local, as well as extremely partial way: if he effectively enacted, in his conduct and manufacture, some founding physiocratic principles, he for instance had no effect whatsoever on liberty of trade.

Yet, quite unexpectedly, this liberty of trade did become a reality in France a few years later. The Restoration of monarchy that occurred in 1815 was indeed a blessing for the Physiocratic theory and Du Pont, who had mostly turned towards the natural sciences after 1803, as well as worked at the Paris Chamber of commerce for a while. The fall of Napoleon was also that of the "neo-mercantilist industrialism" he had promoted, and of the industrialists that supported such a doctrine. At the same time, one discovered that some of the ideas that the physiocrats had restlessly defended for years had progressively been accepted as possible alternatives to Napoleonic policies. Embedded into formulas like "*laisser-faire, laisser-passer*" that could easily circulate and be memorised, they had gained ground in some parts of society. Some of the "natural laws", separately from one another, finally sounded somewhat "natural" to more people. Having long opposed the emperor and his approach to the economy, as well as served kings Louis XV and Louis XVI, Du Pont was considered a wise old man and was thus named in 1814 the *Secrétaire général du gouvernement provisoire*, in charge of the transition between the two regimes for a couple of weeks. There, without the noble landowners who had been been partly disempowered by the Revolution, he was able to contribute a little to the "revaluation of the land property of notables", a fringe of population that would soon become the basis of the new monarchy… and that had been defended from the start by the physiocrats. Laws liberalising business and trade were also issued in the first months after the Restoration and, in spite of the strong rise in prices and the riots that came up consequently, making the setting up of taxes for foreign grain a political necessity, the liberty of commerce inside France became a long-lasting fact. "This political line is typical of the 'adaptations' that the heritage of physiocracy underwent; it had been inherited as a doctrine and seen as a dogma of the 'sect', but was accepted pragmatically" (Démier, 1995:237).

The performation of physiocracy by political engineering had failed but, with the Restoration and the advent of a "dispersed subject" favourable to segments of the "sect's" doctrine, Du Pont participated before his death in the collective, "repeated and errant process" (Butler, this issue) through which elements of the physiocratic doctrine were finally enacted.

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[i] The *Wealth of Nations* is itself dedicated to the leader of the physiocratic school, François Quesnay.

[iii] The texts in question are part of the Du Pont collections of the Eleutherian Mills Historical Library (EMHL) kept at the Hagley Library in Wilmington, Delaware (USA). We consulted them in spring 2008 thanks to funding from the French *Agence Nationale pour la Recherche* program on the "Socio-technical supports of entrepreneurship" (dir. Grossetti M. & Zalio .P.-P.). The documents from the Du Pont archives are referred to in this article by the first letter of the collection they come from (L for the Longwood Manuscripts and W for the Winterthur Manuscripts), followed by the group number and the individual document number.

[iv] Du Pont developed this specific aspect of his thought lightheartedly some years later in: Du Pont de Nemours, 1795.

[v] Du Pont's recent nobility (dating back only to 1783) and his having worked for and defended two successive kings made him an obvious target for the Committee of Public Safety.

[vi] Letter from Pierre Samuel Du Pont de Nemours to his son Victor of November 29th, 1797 (EMHL, W2-504).

[vii] Letter from Pierre Samuel Du Pont de Nemours to his son Victor of December 28th, 1797 (EMHL, W2-514) – the words that are underlined are underlined by Du Pont himself, who writes them in English and spells them this way. Mauritius (*L'Isle de France*) is probably known by Du Pont through one of his correspondents' text (Bernardin de Saint-Pierre, 1773).

[viii] Pierre Samuel Du Pont de Nemours, *Extrait d'un plan d'une opération rurale et commerciale à exécuter dans les Etats-Unis d'Amérique*, not dated (EMHL, L1-469).

[ix] A famous example of colony planning is the experience of the town of Asilum in Pennsylvania, built jointly in the mid 1780's by American entrepreneurs and French noblemen fleeing the Republic, an experience Du Pont must have been aware of and may well have used as a reference in his own colonial venture.

[x] This is a model of action that Du Pont also carried out in his private life: the perspective of being allowed to marry his first wife-to-be, who was raised in a higher class of society than his, was for instance what led him to make moves towards the court. It is also the model of action we have already met in Du Pont's political economy, where the natural order intervened as a stimulating outcome for political action. The conditions that dictated his conduct were always future conditions, as seen from his days, rather than the conditions he lived and had been educated in.

[xi] Pierre Samuel Du Pont de Nemours, *Apperçu sur l'établissement commercial et rural que va former en Amérique la Maison Dupont de Nemours Père et Fils & Compagnie*, not dated (EMHL, L1-471).

[xii] Letter from Pierre Samuel Du Pont de Nemours to his son Victor of March 17th, 1798 (EMHL, W2-526).

[xiii] Letter from Pierre Samuel Du Pont de Nemours to his son Victor of November 30th, 1798 (EMHL, W2-505).

[xiv] E. g. in a "*Table of values, prices, wages, spendings, etc. attributed in the Northern United States to the works, the products of agriculture or industry, etc. An extract from Larochefoucauld-Liancourt's travels*"

(EMHL, W2-5640). The travels of François Alexandre Frédéric de La Rochefoucauld, duke of Liancourt, during his exile in the United States, took place from 1795 to 1797.

[xv] Pierre Samuel Du Pont de Nemours, *État au vrai de notre affaire*, not dated (EMHL, L1-483).

[xvi] Pierre Samuel Du Pont de Nemours, *Catalogue des mémoires*, not dated (EMHL, W2-5472).

[xvii] Letter from Pierre Samuel Du Pont de Nemours to Jacques Bidermann of December 1st, 1800 (cited in Du Pont, 1925:195).

[xviii] Book VI, verse 727.

[xix] Pierre Samuel, although he wasn't much of a measurer, has remained in history as one of the first systematic calculators, using economic calculation to decide upon the opportunity of the Louisiana purchase, for instance (he was actually the one who suggested the possibility of a purchase to Jefferson and then negotiated it with the French government), or the opportunity of home relief for the poor (Etner, 1987).