

# What happened to the revolutionary involvement of scientists?

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Sometimes, I am wondering, with some anxiety, about what people might be thinking about the social conscience of us, the scientists. On the one hand, we hear on the radio or we see on television, not very often one must admit, polite fellows, male or female, who try their best to wear some circumstantial smile, and, with the voice of an infant teacher, argue the merit of some hard to define science. Most of the time, actually, it is only about some technological gadgets, some patented tricks, things that are meant to be useful for something. On the other hand, in France, in the middle of Paris, we have the great ladies and the great men of the Academy of Sciences, or what is left of it. We hardly see the face or hear the voice of these supposed heroes, except one or two conceited bores whom we hear too much. It is certainly true that these great ladies and great men have gone out of fashion, most certainly with some reason. If we do not hear them, however, it is also because they are too busy distributing chocolate medals, essentially among themselves or their close favourites. The rest of the time, they crawl at the feet of the heap of oligophrenic quasi-illiterates ruling the country, hoping for some incomprehensible benefit or some ridiculous decoration. There is also, in addition, the crowd of scientists, us, struggling, exhausted by vain activities such as searching for funds, writing reports for idiots who don't give a damn, we, still trying their best as we can. What is sure, however, is that, except possibly during some occasional ecological or health scandal, nobody hears us object, protest, revolt, say what we feel. Thus, people are quite right if they wonder about us.

Society around us is capsizing, millions of persons in France do not have enough to eat, hundreds of thousands, maybe, do not have the most basic accommodation, and we, scientists, we would be supposed to shut our mouth? We would not be competent to give any judgment on society? We should mind our own business, study, search, and that's it? We would not have the right to protest, to get angry? We should passively accept that the very idea of civilization is being salvaged for Holy Money, just like before it was not possible to attempt anything that could damage the Holy Church? Science today would just be another trick to make money? We scientists, is that this sort of science that we are expected to practice?

It has not been always like this. There were memorable times when scientist, big and small, did not hesitate to drop their servitude for some time in order to get things right again. Actually, it is even the very spirit of this great adventure of mind called science, science whose primary purpose, should we recall, has always been to lift the human soul and human condition, which does not only mean inventing the wheel, the electronic chip or artificial heart. The essence of science is beyond, that is what have taught us, a long time ago, Pythagoras, who is our master of us all, or Anaxagoras, the rebel friend of Pericles. For this science, the only real purpose is the development of the human value, and the revolutionary involvement is then not a deplorable diversion, but it is the very principle of science, its fundamental spirit. Anaxagoras was arrested, jailed, exiled, because he had said that the moon was a stone and not the face of a god, and also because he had advertised an elevated idea of science and its moral responsibility.

Yes, there have been memorable times when it was obvious to us scientists that, when things have become intolerable, then they should not be tolerated. And there is no need to go back to Ancient

Greece. Let's do some history, while we still remember what it is. In a few years, indeed, in France, the disastrous imbeciles of our government will have liquidated this other fortress of our dignity, the study of History. In France, we had an exemplary period, our Revolution, a period of much suffering but, also, so much glory. To throw down the Old Order, there were not only Diderot, Voltaire, Rousseau, Montesquieu, then Danton, Marat and Robespierre, but also there was the people of the sans-culottes and, among them, in the front row, scientists like Gaspard Monge (1746-1818).

Monge, an incredible character! Mathematical genius, whose novel ideas are still being explored today, but also, as most other thinkers of the eighteenth century, simply an amazing universal mind interested in physics, chemistry, metallurgy, biology, botany, and many more subjects. Yes, Monge has become a revered icon, with his schools, his streets, and his monuments. This Monge, however, that the well-disposed world is set to honour, is the servile Monge courting the Marshal of Castries, minister of the King, and the Monge, turned best friend of Napoleon, a very quiet and very obedient Monge. Even among scientists, it is not very well remembered what actually Monge has done. A few years back, when studying technical drawing, descriptive geometry, just one of Monge's creations, was still taught. Limiting Monge to descriptive geometry, however, would be as clever as limiting Archimedes to the cork-screw. And it is also remembered, sometimes, that Monge, together with others, has established Ecole Polytechnique [\[1\]](#), as if it were his only title of glory, as if, actually, this were today something to be still proud about.

There was another Monge, however. A Monge who, when the French Revolution started in 1789, when he was forty-three years old, suddenly remembered his humble origin. Monge, then, got involved with all his spirit in the great Revolution, later to carry it, and to save it. Together with his friend Jean-Nicolas Pache, the son of the gatekeeper of the Marshal of Castries, they established a revolutionary club and joined the Jacobins. Monge active and immoderate, close to the "sans-culottes", the revolutionary militias. Monge gave up his cherished science, his respectable dress of Academician, to participate actively in the 1792 insurrection and the removal of King Louis XVIth. Monge then became minister of the Danton government and, in this position, together with Danton, signed the act of abolition of the monarchy, the first decision of the Convention on 22 September 1792. As for Jean-Nicolas Pache, he became Minister of War and Mayor of Paris, this great Paris of the Revolution, and he was the one who engraved on all official buildings his motto "Liberty, Equality, Fraternity". Yes, this was also a time when the Mayors of Paris were not quite the content-free socioliberals of today.

Monge did not stop there. Together with colleague scientists such as Berthollet, he served Lazare Carnot, another involved scientist, and the Committee of Public Safety, to produce guns and power for the army of the sans-culottes and so organised victory. The foreign troops invading France would be beaten. Gaspard Monge clearly was not a soft revolutionary. Like his friend Pache, he was related to Marat and he was giving the most impassionate speeches during the meetings of the young revolutionaries. "Brothers and friends, tell them that they are not fighting for the cause of a corrupt court or an idiotic king! It is the holy cause of Liberty, it is their property, this Liberty threatened by despotism! It is their cause that they are fighting for!" [\[2\]](#) Later on, Monge started a campaign to dismantle the tight control imposed by the Catholic Church on the society. Definitely, Monge was not a puppet revolutionary. He was one of the most authentic revolutionaries of French History.

The revolutionary Monge, however, does not inspire much. Scientists do not mention this aspect often, as if it were not their job to manipulate social dynamite. Historians do not make much of a case either, for unclear reasons, except to criticize his management of the Ministry of Navy during the Revolution. As if historians were not quite at ease with revolutionary scientists. Carnot, who opposed Robespierre, seems to be a more popular figure... Monge nevertheless did change, too much actually. He was sent to inspect a restless general and was totally fascinated by him. First Monge wanted to use him to get rid of the corrupt mafia of the Directoire regime, but the plan

worked out too well. Monge was the one to become an instrument. The general, indeed, was Bonaparte. Monge became his tutor, his guide, then his unconditional supporter. Together they went to Egypt and, in the car bringing secretly Bonaparte to Paris, in 1799, to prepare his military coup, in addition to his close aid Berthier, there were Monge and Berthollet. Monge probably played some role to secure the passive support of the former Jacobins like Pache and his group. Monge, subsequently, always supported the ambitious general. Monge was in Senate to promote Bonaparte to become emperor Napoleon 1<sup>st</sup>. Monge again behind the preparation of Austerlitz, Monge close to Napoleon till the end, during the Hundred Days, while the other followers had vanished. Monge paid a high price for his involvement. He was stripped of all official titles and positions, hunted by the royalists both for his loyalty to Napoleon and for his active participation in the Convention. He died lonely, sick and poor, hidden by his former students.

Quite a waste, one could say. However, his solitary death reflects the tragic fate of all sincere involvements. The Republic survived and it is the fruit of limitless dedication such as demonstrated by Monge. In the decadent Old Regime of today, in this world so full of misery and also so full of undue privileges, will we find another Monge to guide a new Revolution and throw down injustice? Will there be another Monge to put his signature on the decree of abolition of ultracapitalist abuses? Will there be someone to blow the revolutionary spirit? How many millions of people sleeping in the streets, how many millions of jobless and poor workers will it take for the remaining thinkers to wake up? Is the apathy nurtured by neoliberalism so efficient? And we, scientists, should we not play a role, for a change, instead of being happy with playing the servants of the sarkodoons, the socialozeros, and other disgusting fellows? Is revolt not, in addition to a moral and social duty, a necessity required by the everlasting science that we have the mission to transmit?

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## Footnotes

[1] François PAIRAULT, *Gaspard Monge, le fondateur de Polytechnique* [Gaspard Monge, founder of Polytechnique], Tallandier, 2000.

[2] Gaspard Monge, *Discours à la société des amis de Liberté et de L'Egalité Républicaine* [Speech at the Society of the Friends of Liberty and Republican Equality], in La Rochelle, 31 December 1792, first year of Republic.