

**UNDERSTANDING THE EVOLUTION OF COMMUNICATION ON
NUCLEAR POWER IN FRANCE: MEANS TO ACT**

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ABSTRACT

In France, nuclear power is today a sensitive issue, more often approached with passion than with reason. Indeed, it suffers from the results of a communication almost totally focused on its negative aspects, matched by frequent political connotations. This communication uses particularly mental images, tools intended to direct the thought, not to inform. The point of view of an Historian takes then all its importance: it allows to put into perspective the evolution of the discourse and to perceive very clearly the changes, the steps. This evolution is mainly analyzed here through L'Express, the major French weekly of the period to consider, that is between 1965 and 1997, and more precisely by focusing on mental images. It may lead to an open field of reflection, as an evolution is not definitively fixed.

Keywords: nuclear power, communication, media, public opinion, mental images, France

INTRODUCTION

I am an Historian. My PhD was about the evolution of communication on nuclear power in France. In this field, I have also dedicated to this theme numerous papers.

Nuclear power and the way it is approached have aroused my interest, first because they belong to the fundamental elements that have marked the second twentieth century, between their military and civilian meaning, both bearing the concept of risk.

Moreover, the way to talk about nuclear power in France piqued all the more my curiosity that, frequently, to take interest in this double technology leads to face a wall of incomprehension. Experience shows how difficult it is in some circles to talk about nuclear power without controversy, often aggressive, which obviously raises questions.

Nuclear power is thus a sensitive issue, more often approached with passion than with reason. Why? The answers appear to be obvious: nuclear power suffers from the results of a communication almost totally focused on its negative aspects, matched by frequent political

connotations. As a French senior executive of a company working in this field pointed out during a long interview, not only coal has caused far more deaths than the nuclear industry, but coal-fired power plants are a real problem for the environment, between the emissions of carbon dioxide and those of fine particles. Yet the image of this source of fossil energy is far from bearing the same exacerbated feelings as that attached to nuclear energy.

These exacerbated feelings, this passionate approach in France intrigued me. They have structured my research for years, in support on three established facts.

First established fact: this passionate approach exists particularly in certain circles.

Second established fact: this passionate approach has varied over time.

Third established fact: the terms and representations, which currently point out nuclear power in these circles and in the majority of the media, often come from the communication by mental images. And we must not forget that mental images are intended to direct the thought, not to inform.

These three established facts which question, thus these three sub-problems, allow to refine the central problem: how to change the communication on nuclear power in France?

Materials and Methods

In France, the passionate approach of nuclear power exists particularly in certain circles: it is the simplest established fact to determine. When the subject of nuclear power is approached, communication resembles a trench warfare, each firmly anchoring its positions. Besides, it is coupled with a religious war, none really listening to the arguments of the other, the words of each being discredited even before they could be pronounced. The vocabulary attached to nuclear power is, moreover, often printed with religious connotations.

Let us be more explicit. Apart from the environmental groups and associations whose rejection of nuclear power is one of the means of existence, and to stay here first more in the field of research, the French academic circles most hostile to nuclear power are generally those belonging to the Social Sciences and Humanities. The majority of the French media follow in them footsteps all the more that the theme of nuclear power, open to “sensationalism”, is eminently carrier of audience, therefore of advertising revenues. Let us not forget either that most journalists come from social sciences and humanities trainings. Besides, the “passion” mentioned above leads to the fact that no “open” colloquium (excluding here those held in small closed committees, with no call for papers) in History or Social sciences and Humanities has been dedicated to this theme in France in a recent period. It must be added that in these same

circles, when becomes possible a communication which is not directed to the denunciation and formal accusation of nuclear power, rejection reactions often come during discussions.

The approach to nuclear power is different in the circles close to the French national defense, for which this theme is not a subject that should not be discussed, but on the contrary is an attractive theme, even when it is about issues related to History or to the civilian aspect of nuclear power. Here, communications are welcomed without any animosity, discussions are constructive and pragmatic. Besides, it must be added that, in general, this pragmatic approach to nuclear power in France also includes the so-called “scientific” circles, from the medical field to the colleges of university level specializing in professional training. To quote only one symposium, will be mentioned here the one held in November 2016 in Nantes, organized by the “Ecole des Mines”, a famous French engineering college.

The passionate approach of nuclear power in certain French circles can thus raise questions. When passion supplants reason, are not we in a type of communication concerning convictions rather than reflection, personal commitments rather than logic, ideologies rather than ideas?

Let us bring there an explanation: in France in particular, the image of nuclear power carries the legacy of a recent past, that of the politicization of the subject, and therefore of the debate. The evolution of this politicization of the debate is in itself extremely complex, because it is linked not only to the vicissitudes of the French political life, but also to the reorientations of the international power relations, or still to the major events concerning nuclear power.

Certainly, these major events can be negative, depreciative. Let us take two symbolic and complex examples here.

The first is the use of the nuclear weapon on Hiroshima and Nagasaki by a country often called the “greatest democracy of the world”, a use that for some has stigmatized since then the economic-social model conveyed by this state. Let us be lucid: in many circles and many words in France, the use of the nuclear weapon has since been a mental image linked to “capitalism”, that is to say to the political “right”; the rejection of its use has been by antithesis often linked to “progressivism”, that is to say to the political “left”.

The second example is the Chernobyl accident. If this accident could have been, precisely, an argument used against a system belonging to the political “left”, it was not the case. It was not the case, on the one hand because the erring ways that led to this major accident were attributed to a declining system and that has since disappeared, on the other hand and above all because neither the political “right” nor the supporters of nuclear energy have wished (or have known how) to “use” this affair in France.

If only with these two examples, and it would be easy to multiply them, it is already possible to note simply that everything is a matter of communication, of exploitation of the event or the fact.

Of course, it is necessary to analyze finely how these negative connotations have become the most prominent in France, especially as it can be found, on the contrary, number of positive elements to be connected with nuclear power. We will mention here just two of them, to avoid any effect of catalog.

In the military field, for a “great” state, possessing the nuclear weapon strengthens its weight, its stature, its geopolitical sovereignty, and more or less directly impacts in the same way the political parties that have supported it. Certainly, for a “small” state, the discourse is no longer the same: it is then the negative aspect of proliferation that is put forward, as the elements of geopolitical domination are badly shared. Let us think here about the very current example of North Korea engaging tests of nuclear weapons and missiles able to carry them.

In the civil sphere, the oil crisis, which ended the Post-war economic boom, has for a long time devoted the benefits of nuclear energy. Certainly, have come to lessen these advantages the recurring attack of its opponents and the little efficient response of its supporters. To return to the politicization of the debate, and therefore to the French political parties, the nuclear solution to the energy crisis was regularly approved in France by the political parties belonging to the “right” and the “center”. If the refusal of nuclear energy was still there the one of environmentalism, the position of the other “left” political parties was, on the other hand, very complex over time.

These complex links between nuclear power and political parties are an important element explaining the differences in the reception given to this theme in France.

To go back first to the field of research, in the trainings and the circles related to the Social Sciences and Humanities, nuclear power is very often approached in terms of convictions, even ideologies. Thus, the real and supposed risks linked to it become themes of diatribe: nuclear power is there passion more than reason. In the trainings and the circles related to the “hard” Sciences, nuclear power is generally considered on a more pragmatic level, that of facts and practices. This does not exclude constraints and risks: nuclear power is there realism and reason more than emotions.

This cleavage is important. Indeed, the evolution of the representation of nuclear power for the French public is characteristic of this cleavage between passions and pragmatisms.

Certainly, we are here in the present, contemporary situation. But the point of view of an Historian takes then all its importance: it allows to put into perspective the evolution of the discourse and of the situations as for the communication on nuclear power; it allows to perceive very clearly the changes, the steps.

Indeed, there was a past, a “before”, during which the mental images connected to nuclear power had not yet produced their effect: nuclear power was then generally perceived by the French as a modern technology, a fact; theirs concerns were then different. Then, an evolution led in a few steps to the current situation, almost unchanged since the mid-1990s. Obviously, this evolution was complex: the systemic analysis had then to take into account multiple and sometimes interdependant factors.

More explicitly, and more precisely, how has it been possible to measure this evolution?

It could be done, first through an analysis of the duration, allowing to discern the steps. Indeed, this analysis was carried out over the 33 years corresponding to the period during which this evolution took place in France. If *L'Express*, the major weekly between 1965 and 1997 (it had even often a number of copies higher than the main French national dailies), was mainly used, of course it was put in perspective by some other supports. This analysis made it possible to answer almost all the questions relating to this evolution, “almost” because it was obvious, after studying the some 1,716 issues of the weekly, that we were faced with a voluntarist, constructed evolution, but that it was impossible to answer the essential, namely who has really “directed” this evolution.

Let us be lucid, even brutal: this evolution did not take place on its own. It would be foolish to state impersonally that “the terminology and the arguments have changed”: the words, the images, the representations, the ideas have no life of their own. If they have changed, it is because a will has expressed itself. If journalists were visible actors here, it was hardly possible, with very few exceptions, to know which invisible actors have oriented their discourse, either by providing them with arguments (let us remember that a journalist, even a specialist, can not know everything), or by requiring an idea to be expressed (even if this assertion may seem to deny the independence claimed by them). Since, in most cases, it was only possible to estimate who these “invisibles” were, this aspect has been left aside, in order to focuse only on the perceptible part of the evolution, even if it remained somewhat frustrating not to know who held the reality of the real powers, that is to say the modeling of the public opinion.

More explicitly, and even more precisely, it was possible to measure the evolution of the approach of nuclear power in France, by decrypting the “tools” of the journalistic communication intended for public opinion, that is to say by focusing on the elements that are likely to influence the thoughts, very different from those whose sole purpose is to inform: these “tools” are mental images.

Let us first briefly recall this point.

A mental image is a pictorial representation of a fact, a reconstruction of reality which makes “present a thing absent from our perceptive field” (Jean-Marie Gallina, 2006, p. 20). More explicitly, “A mental image corresponds to the impression we have, when, for example, we have read or heard the description of a place, to see it almost as if we were there. A mental representation is elaborated in a quasi-hallucinatory way, and seems to borrow its characteristics from vision. We see” (Martine Joly, 2005, p. 13). The role of mental images has been widely emphasized in the past by some authors, although sometimes they may be questionable (at least in France), such as Gustave Le Bon (1895).

The recipient of mental images, the public opinion, is a notion to be considered with all the more seriousness that, in our democratic societies, this public opinion holds the *Imperium*. Since “The mass has become a political stake with the advent of democracy in the modern sense of the word, that is to say with the emergence of formal and egalitarian citizenship [...] Henceforth home policy is defined by the management of the masses; public opinion becomes a factor of government; collective influence a tactical element” (Michel-Louis Rouquette, 1994, p. 17).

One of the vectors of these mental images, before the intense development of the audiovisual media, was the press. It is often still so: “the press is often the source of the audiovisual media in terms of ‘making the news’, and not the opposite, as it is too often believed” (Gérard Spitéri, 2001, p. 4), at least for the period analyzed here. Through journalistic discourse, because he believes he can read at will, “The reader is generally unaware of the almost irresistible persuasive influence of the newspaper that he usually reads” (Gabriel Tarde, 1989, p. 9).

This persuasive influence, this weight of mental images induced by journalists is important: “Journalistic information is not only a way to restore the facts of the news and the opinions of the social actors. It offers a vision of reality, it is not innocent of any intention to reveal certain aspects rather than others in order to make it evolve, to change things” (Daniel Cornu, 2010, p. 9).

Applied to nuclear power, this modification of reality has been studied punctually in France (Veron, 1981; Lecerf et Parker, 1987). It has not, however, been the subject of an important

study both on the duration and in terms of a deeper reflection. And, of course, this study was necessary.

Let us provide here a final element of precision: mental images belong to two complementary categories, mental images that we will call “literary” and mental images that we will call “graphic”. The effective “literary” mental image is generally obtained by the association of two words, a substantive and an adjective, in order to obtain a binary formula, which impacts both the reflection and the very understanding of the question. And so does the “graphic” mental image, although it has a different nature. Indeed, the “graphic” mental image is conveyed by caricature, photography, cartographic schema, or still page setting, that is to say by *a priori* more intuitive elements, whose fine analysis requires certain skills in art history in particular. We will not deal here with this type of mental image, since this paper can not exceed 20 pages.

Results and Discussion

The literary mental images of nuclear power are numerous, their variety and their power have fluctuated between 1965 and 1997. Let us first highlight some of them, often used in *L’Express*, to give examples (Table 1: significant examples of literary mental images of nuclear power):

Group	Substantives	Adjectives
Mental image with a substantive from the nuclear register, linked to an adjective belonging to another register <i>[during the period studied here, each of these substantives has been attached almost to each of these adjectives, with the exception of “profitable” which was associated only with “power plant” and “fuel”]</i>	Atom Bomb Power plant Fuel Wastes Engine Reactor Submarine	blind diabolic demoniac frightful dreadful fatal disgraceful infernal deadly <i>profitable</i>

		ruinous terrible
<p>Mental image with an adjective from the nuclear register, linked to a substantive being foreign to it</p> <p><i>[during the period studied here, each of these substantives has been attached almost to each of these adjectives]</i></p> <p><i>[are also added over-compound mental images, such as “frightful nuclear danger”, which appeared 34 times]</i></p>	<p>Blackmail Threat</p> <p>Cataclysm Death</p> <p>Nightmare Peril</p> <p>Danger Fear</p> <p>Energy Pollution</p> <p>Hell Progress</p> <p>Terror Risk</p> <p>Era Secret</p> <p>Hope Security</p> <p>Explosion Safety</p> <p>Holocaust Terrorism</p> <p>Independence</p>	<p>atomic</p> <p>nuclear</p> <p>radioactive</p>
Figure of speech	<p>A fireball topped with a gigantic mushroom</p> <p>This commercial traveller of collective death</p> <p>The hydra of the fire of the sky</p> <p>The original sin of Hiroshima</p> <p>The sun in a bottle</p> <p>Dr Strangelove specter</p>	

Table 1: significant examples of literary mental images of nuclear power

We can immediately notice that the negative, accusatory, pejorative register is clearly more important than the positive, appreciative register (in *bold italics*). Indeed this weekly has tried regularly to increase the mistrust or even the rejection of nuclear power; and it was not an exception in the French media. The information work of its supporters could then seem vain when one becomes aware of this important deficiency in their communication strategy, becoming sometimes even incompetence when this one was entrusted to “specialists”. There is on that point, for nuclear power plant managers in particular, a field of reflection that remains open.

Beyond the variety of terms, the evolution over time of the literary mental images of nuclear power was in fact mainly that of their frequency of appearance. The following table (Table 2: frequency of the literary mental images of nuclear power) indicates the average frequency of appearance of the literary mental images per article (m/a: mental image per article) in all the articles dealing completely with nuclear power during the indicated sub-period and period:

Frequency of literary mental images		Sub-period	Comments on the sub-period	Period
Civilian	Military			
2.3 m/a	3.7 m/a	1965 - 1968	<i>Nuclear power was initially a very little contested tool</i>	Between 1965 and 1974, nuclear power became gradually polemical
2.9 m/a	2.9 m/a	1969 - August 1973	<i>The polemical sense was set up progressively</i>	
1.9 m/a	2.8 m/a	September 1973 - 1974	<i>Communication on nuclear power oscillated between necessities and fights</i>	
2.4 m/a	3.1 m/a	Averages of the period		
+ 0.6 m/a	+ 0.7 m/a	Average absolute deviation		
2.2 m/a	2.2 m/a	1975 - April 1978	<i>A rupture led the polemic to become politics</i>	Between 1975 and 1986, polemical and political nuclear was affected by crises
1.9 m/a	2.0 m/a	May 1978 - April 1981	<i>Appeasements alternated with punctual exaltations</i>	
1.7 m/a	3.0 m/a	May 1981 - March 1986	<i>This sub-period was the one of warrior pre-eminences</i>	
1.9 m/a	2.4 m/a	Averages of the period		
+ 0.1 m/a	+ 0.0 m/a	Average absolute deviation		
1.9 m/a	1.7 m/a	April 1986 - December 1991	<i>Shocks emerged</i>	Between 1986 and 1997, communication on nuclear power suffered less from crises than from ideologies
0.3 m/a	1.6 m/a	1992 - May 1997	<i>Appeasement dominated in spite of some stirs</i>	
1.1 m/a	1.7 m/a	Averages of the period		
- 0.7 m/a	- 0.7 m/a	Average absolute deviation		
1.8 m/a	2.4 m/a	Global average		

Table 2: frequency of the literary mental images of nuclear power

The overall result is significant: the average frequency of the literary mental images of nuclear power per article is decreasing over the general period studied here.

Certainly, this frequency is more important than the global average during the first period, between 1965 and 1974: it was a period of exaltation, directly linked to the personality of the owner of the weekly, Jean-Jacques Servan-Schreiber, who made the fight against nuclear power a personal cause.

The first sub-period of this first phase, between 1965 and 1968, may seem strange: if nuclear power was then relatively uncontested, yet punctual events made it possible to develop virulent mental images.

First of all, during the summer of 1965, the important commemoration of the 20 years of the bombings of Hiroshima and Nagasaki took place. This commemoration was then all the less fortuitous in France that, in this country, the image of nuclear weapon was closely linked to the personality of Charles de Gaulle, then President (elected by the parliament), and who wanted to remain so. The preparation of the first election of the President by universal suffrage was then a strong moment of disparagement of the weapon for Jean-Jacques Servan-Schreiber, as he was a determined political opponent of Charles de Gaulle. Thus, mental images were numerous (frequency of 4.5 m/a), from “the unbearable nuclear horror” to “the immense nuclear terror” (*L'Express* n° 734, 12 July 1965, pages 24-29, this single article containing no less than 37 mental images).

Then came the Palomares accident (in Spain). When it took place, in January 1966, the processing of information was almost indifferent, even amused, as with “Since I swallowed these radioactive stuffs, one Vera resident told me, I have never felt so virile” (*L'Express* n° 764, 7 February 1966, page 28). But a year later, when the parliamentary elections approached in France and while the opposition parties had strengthened, the tone became aggressive, the mental images brutal and numerous (frequency of 4.2 m/a), the extrapolations realities. “What could have happened”, if one of the bombs had exploded, was clearly put forward.

In autumn 1968, the diatribe resumed. The failure of the spring 1968 movements was mitigated by the implementation of a new ideological theme: that of the “Paradise lost”, of a nostalgic and idealized “formerly”. It was on this theme that the first environmental movements began to develop in France. It was on this theme that the mental images hostile to nuclear power exacerbate (frequency of 2.9 m/a). It was from this theme that began to be developed a new mental image of “scientists”, people of course competent, but disconnected from “reality”, from the “real life”.

The second sub-period is connected to the latter: between 1969 and August 1973, the struggle of Jean-Jacques Servan-Schreiber resumed with a renewed vigor, mental images became more negative.

The polemical sense was put in place progressively, by “cutting remarks”, with two strong moments. The first was towards the end of 1972, in connection with the March 1973 parliamentary elections, which saw the return of a united Left in France (frequency of 4.2 m/a for civilian nuclear power). The second corresponded to the summer 1973 press campaign, following the new electoral disillusionment for the Left and the beginning of the economic crisis increasing tensions (frequency of 3.3 m/a for civilian and 4.2 for military).

If the will to politicize the debate failed, on the other hand the impact of certain mental images was not negligible. In connection with the rise of the oil crisis on which the main concerns were based, the weekly’s editorial highlighted the theme of the nuclear “costs”. It was then the beginning of numerical comparisons. It was also the beginning of a new image of scientists, shown as always in search of money, of funding: their constantly renewed financial appetites kept them apart from the “real life”, that of the “return to nature”, based on the nostalgia of an idealized past.

The third sub-period, between the failure of the summer 1973 press campaign and the following one, that of the end of 1974, is marked by this dichotomy.

The polemic disappeared for a moment in front of the necessity of this civilian nuclear energy which had to mitigate the shortage of hydrocarbons: the frequency of mental images fell punctually to 0.2 m/a, while the image of scientists was suddenly and strongly enhanced. We can note however that the latter either did not perceive this evolution in their favor, or were unable to seize the opportunity from it.

These silences resulting from necessity soon gave way to the gradual resumption of the fight, during the spring of 1974 (frequencies in the average). A new press campaign, better prepared, relied on the negative associated with military nuclear power to gradually focus the offensive on civilian nuclear power (frequency of 6.8 for civilian nuclear power and 4.9 for military nuclear power).

Relayed by almost all the national and regional press, this campaign succeeded all the more that it seemed a way to destabilize the government of the new President Valéry Giscard d’Estaing, elected with a short head on his left opponent and not really gathering all the right forces. This campaign culminated in a parliamentary debate on what had become the nuclear

“Question”. It was this time a success: nuclear power had become a societal concern, the debate had become political, a more effective dialogue was expected.

The second period opens with this spring 1975 parliamentary debate.

The readers of *L'Express*, as well as those of most of the French media, were amply prepared for this debate (frequency of 3.3 m/a). But, to the great disappointment of the “progressive” press, this debate was a failure for nuclear opponents: the economic necessities linked to the oil crisis, but also the tensions between East and West, led almost all parliamentarians to approve the construction of nuclear plants, and secondly to maintain intact the deterrent force (decline of the average frequencies).

If the second sub-period, between May 1978 and April 1981, continues generally in this way of appeasement, it nevertheless differs from the latter by several elements. First, it was marked by the Three Mile Island accident. However, following this accident, the frequency of negative mental images increased relatively little (2.1 m/a in the following weeks), and then quickly decreased (0.5 m/a).

Exaltations centered then on military nuclear, between the concerns aroused by agreements (SALT-II) becoming too slowly a reality and those connected to the beginning of the Euromissile Crisis (frequency of 3.2 m/a). They affected the French domestic policy, especially as presidential elections were taking shape: if the French Communist party and its leader (Georges Marchais) were clearly decried, another political leader, François Mitterrand, knew then how to take advantage of an unfavorable context for the outgoing President. Skillfully, the Socialist candidate succeeded in getting the dissatisfied, in particular those of nuclear power, now more structured, and, without firmly promising them anything, succeeded thus in securing his victory in 1981.

The third sub-period, between May 1981 and March 1986, is mainly marked by two trends.

On the one hand, the cacophonies and then the choices of the new government about the civilian program aroused criticisms both from the journalists of *L'Express* and from other actors that they put forward. And these actors were numerous, from the various right-wing parties to the Communist party, not to mention the environmental movements who felt duped by the oversight of the campaign promises. But beyond these criticisms, what prevailed was the promotion of the civilian nuclear energy, hence a continuation of the decrease of mental images.

On the other hand, and above all, the Euro missile Crisis increased. *L'Express* clearly took sides with the American camp, whereas the attitude of the new French government was less clear. Mental images linked to the nuclear weapon exacerbated (frequency of 3.8 m/a). The

choices of François Mitterrand led him soon to a dead end: his Eureka project did not obtain the expected success, especially as it was soon tainted with the Rainbow Warrior affair (frequency of 3.9 m/a). Despite this, however, the discourse did not fall again into the fierceness of the previous period.

On the eve of the 1986 parliamentary elections, nuclear power appeared to be entered in a routine form: if its dangerousness was then acquired, its denunciation was in fact more a posture than a real conviction in France. Only the environmentalists were firmly against it. In addition to their recurring protests against power plants, their links with the “left of the left” made them join the French Communists in the diatribes against the Euromissiles, initiated by the Soviets. But on the one hand *L'Express* relaid little their demands, and on the other hand the French Communists were in favor of the civilian program, hence a certain appeasement on the theme that can be found (decreasing frequencies despite some peaks).

Precisely, it was this will of appeasement which dominated the following period (April 1986 - May 1997), although major shocks could have led to a higher frequency of mental images.

Indeed, the first sub-period, between April 1986 and December 1991, was marked by two first-rate shocks.

The first shock was that of the Chernobyl accident. It marked durably the minds, it has gradually become a pregnant mental image by its only evocation, it put the political leaders in power and some scientists into a difficult situation in France. Nevertheless, when it occurred, the strong mental images spread about it took a moderate extent (frequency of 2.6 m/a). At least three elements could have considerably increased their frequencies: its gravity, at the highest level of the INES scale; its location, close to France; the country in which it took place, a traditional geopolitical opponent.

The second shock brought together the negotiations around the American SDI (Strategic Defense Initiative), the pressures for disarmament and the end of the Soviet Union (frequency of 4.3 m/a). With the end of the Cold War which took shape, the stakes evolved, questions arose on the various deterrent forces, without, however, really calling them into question, as old threats (such as proliferation) induced in particular by new actors (such as Iraq) occupied then the center stage. However, tensions ended up falling, as the general atmosphere of détente induced a clear decrease of mental images.

The second sub-period, between 1992 and May 1997, was well that of appeasements (average frequency of 0.3 m/a for civilian nuclear power and 1.6 m/a for military nuclear power). These appeasements did not mean the end of concerns, about proliferation or still about the

management of the civilian nuclear power in the East. These appeasements did not mean either the end of tensions: an important crisis occurred, the one induced by the decision of the new French President Jacques Chirac to resume the French nuclear tests (frequency of 4.3 m/a). These appeasements were in fact more appearance than reality: we shall come back to them in conclusion.

Conclusion

Let us now conclude. In 1997, it was no longer necessary to mention the potential danger from the exploitation of nuclear power: it was a fact all the more well known from the French public opinion that it had even been present for many years in the textbooks of primary school, middle schools and high schools, as in many television programs.

Over time, it is clear that communication on nuclear power has evolved, and that the dichotomy of the language has strengthened in France.

On the one hand, there were and there are those who make nuclear power a passionate object, especially as their activities are distant from it and as their training has positioned them in the mental rejection of this technology. On the other hand, there were and there are those either who regard it as a scientific object or an object including fields of objective studies, or who perceive in it only a technique whose use deserves attention but whose expectations are promising, whether it is about energy production or about geopolitical positionings.

The first ones, who were hostile both to power plants and deterrent forces, had long been obliged to yield both to economical and geopolitical requirements. They retain from these apparent failures an evident animosity. The second ones, who perceived in civilian or military nuclear power only challenges to be taken up, have succeeded this technological bet. They retain from that “at worst” a distancing close to indifference, “at best” an undeniable interest for this technology symbolizing modernity.

This cleavage had and has an impact on the French public opinion. The failures of the first ones were only apparent: they have been able to convey pejorative mental images for years, and these pejorative mental images, which were amply reiterated, have been durably implanted in the minds. The appeasements of the last period we have highlighted are then better understandable: the mistrust was and is installed, it was and is therefore no longer necessary to insist on that point. For the French public opinion, nuclear power conveys thus an unflattering global mental image: the lack of any real will (or competence) of communication from those who support it is thus patent.

If today, in 2017, tensions still appear to be calmed, should not the choices made in some countries close to France to give up these civilian technologies definitively attract the attention of all, and even more the scientists than the military?

The communication on nuclear power in France, or more precisely the mental images which generally go with this theme are not definitively fixed: a language evolves, as the ideas.

Let us ask ourselves the question: when will the actors of nuclear power become aware that the future of their sectors depends on a different communication, an active communication, therefore and obviously a passionate communication, but going in their direction? Let us recall that in a democracy it is the “crowd” which holds the political *Imperium*, in the first sense of the term: should not they convince the French people before others do?

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