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## *Technological Spectacles*

In the France imagined and enacted by the engineers and workers I have discussed, technically trained men would—by planning, building, and operating large-scale technological systems—play a leading role in shaping the nation's future. What place did this conception leave for people not involved in creating and running those systems? How did ordinary citizens see the new technological France, and how did they fit into it?

These questions address the two overlapping domains of representation and experience.<sup>1</sup> We need to understand the terms in which technological change was presented to ordinary people. To a certain extent, these terms shaped how citizens viewed the making of technological France and how they situated themselves in the new nation. But people who lived near the sites of large-scale technology also had experiences that did not fit into the representational frameworks they were offered.<sup>2</sup> We must also, therefore, examine those experiences and their interpretations of them. In this chapter, granting that such divisions are inherently artificial, I will focus primarily on representation; in the next chapter I will concentrate mostly on experience.

Popular representations made technological change into a spectacle. This spectacle could take either of two related forms. In one form, the technological spectacle was a *drama* that played out (and intertwined) the themes of salvation, redemption, and liberation. In this drama, technology would save France from economic and cultural disaster and redeem it after the humiliation of the Occupation. Through technological achievements, the French would perform a second liberation, not thanks to American soldiers but thanks to their own knowledge and resources. In its second form, the technological spectacle appeared as a *display*. Journalists compared reactors to cathedrals or other historical monuments and described beholding them as a kind of transcendental experience. Reactors were configured as tourist sites—displays that could

be visited, like monuments or museums. Both kinds of spectacle made large-scale technological change into something the public could consume—by reading, gazing, and touring.<sup>3</sup>

The two forms of technological spectacle operated at both the national and the regional level. The spectacle—jointly produced by journalists, technologists, and politicians—was narrated or performed in the popular media. Many articles on French technological achievements in mainstream newspapers originated with press releases issued by the CEA or by EDF. Journalists adopted and adapted metaphors used in these press releases, spreading them well beyond the confines of the original institutions. The distinction between journalism and promotion was further blurred when an industry sponsored an entire page or section of a newspaper. Typically, such pages combined straightforward ads with “news” articles about the latest technological developments.<sup>4</sup> The production of the technological spectacle was thus neither entirely choreographed nor completely random, but somewhere in between.

National-level representations appeared in newspapers with nationwide circulations and on radio, television, and film. We must keep in mind, however, that journalists in these media did not write from some kind of abstract national perspective: they worked in and wrote from Paris. Parisians also formed their main audience. According to a 1955 poll, only 15 percent of French citizens read these publications and no others. In contrast, half of the population exclusively read its regional press. And 27 percent of all men and 17 percent of all women claimed to read both.<sup>5</sup> Clearly “national” newspapers held limited interest for the majority of French citizens who lived outside the capital.

Analyzing representations at the national level is therefore necessary but insufficient, particularly when the ultimate goal is to understand the social life of these representations and the experience of ordinary people. I therefore examine representations operating at the local level as well. In keeping with the rest of this book, I focus here on the area around the CEA’s Marcoule site and the area around EDF’s Chinon site. Indeed, most of the discussion concerns the immediate vicinities of these two sites. For the sake of rhetorical convenience and with apologies to the rest of each region, however, I refer to these areas by the names of the larger regions within which they are located. In the case of Marcoule, this is the department of the Gard. In the case of Chinon, this is the region known as the Touraine, which includes the department of the Indre-et-Loire.<sup>6</sup>

The local representations co-produced by site administrators, journalists, and elected officials had a more obvious strategic dimension than

their national counterparts. The departmental and municipal officials who expressed the greatest enthusiasm for nuclear sites collaborated with site administrators in efforts to persuade residents of the benefits of modernization. They expressed these benefits in terms of local social and economic interests, and their explanations appealed to a sense of regional culture and history. Local officials thus operated in a space between the region and the nation: they represented their region when they negotiated with site administrators, and they spoke for the nation when presenting modernization proposals to their constituents.

As a result, residents of the Touraine (*Tourangeaux*) and those of the Gard (*Gardois*) saw the nuclear sites as both a local and a national phenomenon. Most obviously, they were local on a physical level, and therefore had a significant social and economic impact on the two regions. Additionally, leaders and some residents in both regions sought to appropriate the sites as sources of regional pride and natural extensions of local history. This did not mean that residents framed the sites uniquely in local terms. In part, the cultural appropriation of the site on a local level worked through a dialectic between the nation and the region. Thus, for example, the Tourangeaux framed the Chinon nuclear site as a “château of the twentieth century,” thereby situating the site in a historical line with the Loire Valley châteaux of the Renaissance. This gave the site a local meaning, but one that derived part of its significance from the relationship it evoked between the Touraine and France. Loire Valley châteaux were important because they had housed the kings and queens of France; the nuclear site would, by analogy, place the region in an equivalent position of leadership. The nuclear sites brought the nation into the region, unbidden.<sup>7</sup> In the process of making sense of the new arrivals and seeking ways to turn them to best economic and cultural advantage, local residents used the sites to resituate their region within the nation.<sup>8</sup>

In the bulk of this chapter, both in my national and my regional discussions, I examine the spectacle of French technological radiance produced by journalists, officials, and technologists. In French, *spectacle* refers to theater productions as well as to less structured displays. Just as critics might review a theatrical production, a range of critics assessed France’s technological spectacle. These critics came from a broad cross-section of French society, including communists, Poujadistes, satirists, science journalists, and religious leaders. This wide range meant that the critics were in no sense organized. Many of them lambasted the pageantry of France’s nuclear strike force, but they did so from many different perspectives and for different purposes. Despite the best efforts of some of them, these

critics did not orchestrate effective opposition to nuclear technology—they failed, for example, to persuade large numbers of people to protest the French bomb. They did succeed partially, however, by offering audiences an alternative lens through which to view technological development. In the last section of this chapter I consider how the spectacle and its critics blended in popular imagination by examining a 1957 play produced by residents of the Gard about the arrival of Marcoule in their region. This play can be understood as a counter-spectacle to the dominant display of French technological radiance—one in which the actors constructed a narrative that combined dominant representations, the insights of critics, and their own local interpretations of technological change.

### *Salvation, Redemption, and Liberation*

The Allied nations saw the US bombing of Hiroshima and Nagasaki as a spectacular end to World War II. Even as they expressed horror at the victims of radiation poisoning, Western journalists described the atomic explosions in awestruck terms. Everyone agreed that humanity had unleashed an enormous new force. Anxious to find a role for their nation in this development, French journalists immediately began to write France into the narrative of the atom bomb.<sup>9</sup>

They found a ready-made hero in Frédéric Joliot-Curie, the son-in-law of Pierre and Marie Curie, a Nobel Prize winner, a member of the Communist Party, and the CEA's first scientific head. Press accounts varied as to Joliot's role in the development of the atomic bomb (as did their accuracy). Some claimed he had provided the crucial link by discovering fission and chain reactions; others referred more vaguely and modestly to "important discoveries."<sup>10</sup> Soon, though, a more entrancing aspect of Joliot's activities came to light that made for even better drama: his role in the Allies' procurement of heavy water, a potential moderator for fission reactions. In 1947 this story was dramatized in the film *La bataille de l'eau lourde*.<sup>11</sup>

In the opening credits, the film claimed to "retrace faithfully the adventure of the men who participated in the battle waged by the Allies against Germany for the possession of a rare product of capital importance to the conquest of Atomic Energy: Heavy Water." The director had enlisted the collaboration of the very men who had participated in this battle: various members of the Norwegian and French Resistances, Raoul Dautry, and three scientists (Frédéric Joliot-Curie, Hans Halban, and Lew Kowarski). These men, said the opening credits, "re-live on the screen, in



scrupulous exactitude, the episode of the secret war that History is already calling—THE BATTLE OF HEAVY WATER.” Sure enough, Joliot, Dautry, and the others played themselves in this reenactment of wartime events.

The film opens with Joliot speaking to his colleagues and students at the Collège de France about the fantastic contributions that nuclear energy could make to human progress. He then appears in his laboratory, discussing the need for heavy water with Halban and Kowarski. The only manufacturer of heavy water is in Norway. Thanks to Dautry, the scientists persuade the Norwegians both to sell them heavy water and to withhold the substance from the Germans. Dautry sends a team to Norway, and they successfully accomplish the dangerous mission of exporting the heavy water. Other missions ensue throughout the war as the Allies try to blow up the heavy water factory in order to prevent the Germans from obtaining the substance.

This movie fit into a genre of Resistance movies made after the Liberation (and indeed derives its title from the most celebrated of these, René Clément’s *La bataille du rail*). Its message could not be clearer. French scientists and Resistance fighters played a crucial and heroic role in helping the Allies with their atomic bomb research. By preventing the Germans from getting the bomb, they helped to win the war. The presence of real historical figures asserts the veracity of the story and underscores the heroism of the men involved. In this drama, French scientists redeem their nation by playing a part in the Allied victory.

Joliot did not remain a nationally acclaimed hero for long. As the Cold War intensified, his speeches increasingly intertwined communist rhetoric with calls for the peaceful application of scientific research. The hero became more and more controversial. *Le Parisien Libéré*, *Le Figaro*, and other right-leaning papers accused him of making the CEA a communist stronghold.<sup>12</sup> The communist paper *l’Humanité*, meanwhile, lionized Joliot, linking his fate with that of the nation in headlines such as “Joliot-Curie and French Science—Ramparts of National Independence.”<sup>13</sup>

Joliot himself may have lost national favor, but the drama of his wartime heroism had many sequels. In the most widespread of these, scientists and engineers appeared as the potential or actual saviors of a declining nation.<sup>14</sup> Ministers, technologists, labor unions, and editorialists issued repeated calls for greater numbers of scientists, engineers, and technicians to secure the future of the nation. These appeals resembled calls to arms, evoking wartime urgency and appealing to the patriotism of their audiences: “France . . . is counting on your willingness to change your own destiny by orienting yourselves toward mathematical and scientific studies.

Our country needs engineers and technicians.”<sup>15</sup> The Communist Party was particularly adamant on this score, but the patriotic call transcended party politics and appeared in both national and regional papers.<sup>16</sup> Advertising for technical training programs also linked the future of individuals to the future of the nation. Witness, for example, this 1961 ad for the Institut Technique Professionel: “Engineer.—Our country, rich in uranium, has nothing to fear from the future if it can make its youth aware of this new path. At the time when the atomic plant at Avoine (Indre-et-Loire) is being built, we can better understand the prospects offered by this new science which needs a great number of engineers right away.”<sup>17</sup> A photograph of a young man in a white coat sitting at a control board illustrated how prospective students could simultaneously serve their nation and secure their own future.

How, precisely, could engineers serve and save the nation? General audiences often read the answer in the form of dramatic adventure tales that paralleled the dynamic of the nation’s wartime experience of victory snatched from the jaws of defeat. Consider the stories told about the Caravelle jet airliner. *France-soir* ran a week-long series that told the story of the birth of this “prodigal child of French aviation.” The series appeared on the same page as a serialized novel and was dramatized in much the same way. French aviation, which once had led the world, had sunk so low after the war that Air France had refused to purchase French planes and had bought American ones instead. “For the average Frenchman,” said one of the articles in *France-soir*, “this was another small humiliation, another lost illusion.”<sup>18</sup> (The initial “humiliation,” of course, had been the 1940 defeat.) In 1957, however, young French aviation engineers had saved the day by developing the Caravelle’s “revolutionary” engines: “No point in asking . . . which one found the ‘trick.’ . . . Satre [the chief engineer] peremptorily declares: ‘The Good Lord was with us.’”<sup>19</sup> The rest of the series recounted the “epic struggles” that eventually resulted in the successful manufacturing of the plane that would serve as “France’s ambassador to the world.” Coverage of the Caravelle by other papers across the political spectrum followed this pattern.<sup>20</sup> Over the course of the 1950s and the 1960s, the mass media offered similar promises or affirmations of salvation through many other technologies.<sup>21</sup> In 1957, *Le Figaro*, particularly anxious that France retain its status as a colonial power, published numerous articles arguing that French technology would also provide salvation to the territories of the empire. A typical article argued that French technical personnel were essential to Algerian development and proclaimed: “We will have definitively saved

Algeria on the day when it becomes an envied model, a 'pilot-country' for the whole Arab world."<sup>22</sup>

In dramatic accounts of the Caravelle and of other technologies, religious metaphors of salvation and redemption were tied to reenactments of the Liberation (or promises of new liberation), as though France could atone for the unforgivable defeat of 1940 through technological development. Throughout the 1950s and the 1960s, ministers and presidents performed similar pageants in their ritual visits to inaugurate sites of French technological radiance. The live audiences for such events consisted of plant workers and local residents, but thanks to the press, radio, and television the rituals also had a virtual national audience. Toward the end of the Fourth Republic, for example, President René Coty traveled to Colmar, in Alsace, to inaugurate EDF's latest hydroelectric plant. *Le Figaro* explicitly linked the event to postwar euphoria. The president received an "indescribable welcome: the atmosphere is like that of the joyful hours of the Liberation. All along his route, [crowds] cheer deliriously for Mr. René Coty standing up in his car."<sup>23</sup> After the inauguration, Coty toured Colmar, attended a banquet, and watched a display of regional dances and costumes. If the inauguration served as proof of the "incessant progress of French technology," surely the other festivities reaffirmed the Frenchness of the much-disputed Alsace region. The inauguration thus simultaneously asserted French technological radiance and confirmed national borders.<sup>24</sup> Charles de Gaulle, a big fan of such events, offered a similar performance two years later on his visit to Sud-Aviation, manufacturer of the Caravelle. According to *France-soir*, he too was greeted ecstatically by workers, who crashed through the barriers separating them from their leader, eager to shake his hand. Presumably, de Gaulle's speech did not disappoint them:

I am profoundly impressed by what I see at Sud-Aviation. . . . The splendor, the immensity . . . and it's all of you, gathered here, who impress me. You are lucky, because with your problems, even your pain, and all your worries, you are part of a great work [*grande oeuvre*]. . . . From here, in increasing numbers, emerges the fast, the only, the sweet 'Caravelle' that takes off into the sky toward all the nations of the world, to represent France and show what she is capable of when she wishes. . . . France too is lucky, despite her difficulties, despite the obstacles which arise inside and out. Your achievement proves that she is worthy, and that she is France!<sup>25</sup>

De Gaulle thus cast these workers as actors in "the splendor, the immensity" of the technological drama. At least for a brief moment, they were the spectacle too. Such performances were repeated throughout the

1960s.<sup>26</sup> Official visits and inaugurations served both to commemorate French technological radiance and assert its marvelous qualities.

The most awe-inspiring show of all, for de Gaulle and for much of the mainstream media, was the display of France's first atomic bomb exploding over the Sahara on February 13, 1960. The next day, a photograph of the mushroom cloud covered the front page of *Le Journal du Dimanche* (the Sunday edition of *France-soir*) under the headline "Here are the first photos and the first story of the French atomic explosion."<sup>27</sup> The paper devoted four full pages to the event. It profiled the men responsible for developing the bomb, listing their war records and their colonial experience.<sup>28</sup> One journalist also provided what he called a "film of the explosion":

1 a.m.: Last meeting of the military chiefs around General Ailleret. Everything is ready.

2 a.m.: The chief of staff arrives in the large room of headquarters, 13 kilometers from point zero. In the middle of the room, a table with seven buttons.

H hour – 35 min.: The automatic "program" is set off. Headquarters supervises the final stages on two television screens.

H hour – 14 min.: At Reggane, the army's radio reporter leaves his microphone on. You can hear the final sounds of the trumpets calling in the troops.

H hour – 2 min.: At headquarters, the "automatic program" continues its operations. At Reggane, the radio reporter announces, "the men have taken their safety positions, seated on the ground, with their backs to the tower, their heads between their knees. Two rockets, white and orange, have just left."

H hour – 1 min.: At Reggane, the radio reporter announces, "three orange rockets have just left. Only 50 more seconds." Watch out! a red rocket has just taken off.

7:04. H hour: A formidable roaring resounds. A ball of fire rises in the sky. But the shock wave takes 1 minute and 15 seconds to be felt at Reggane.

H hour + 1 min.: The radio reporter describes the scene. An immense atomic mushroom now rises in sky, above the barracks. The base is mauve. The mushroom is getting bigger, its base is growing. The light is blinding. "Holy cow! the moon pales in comparison," we hear.

The radio reporter continues: "the top is now taking the shape of an immense spherical ball, a kind of comet whose tail is made of smoke and whose head is made of snow.

The mushroom continues to grow. The glare is still strong. Just now, despite my folded arms, despite my special glasses, I had the impression that the light penetrated my arms, my glasses, my eyelids."<sup>29</sup>

In this and other descriptions, the French bomb was an amazing show, a carefully orchestrated, awe-inspiring display of strength and (literal and metaphorical) radiance. The bomb had celestial dimensions: it made the

moon pale in comparison, it resembled a giant, bizarre comet. The light it emitted blinded and penetrated the human body. Articles in papers that approved of the bomb quoted de Gaulle and his cabinet waxing rhapsodic about the fabulous success of the test, and published sidebars assuring their readers that the fallout had completely bypassed inhabited regions of the desert.<sup>30</sup> Even the publications that denounced the French bomb and its fallout granted—and criticized—its theatrical quality.

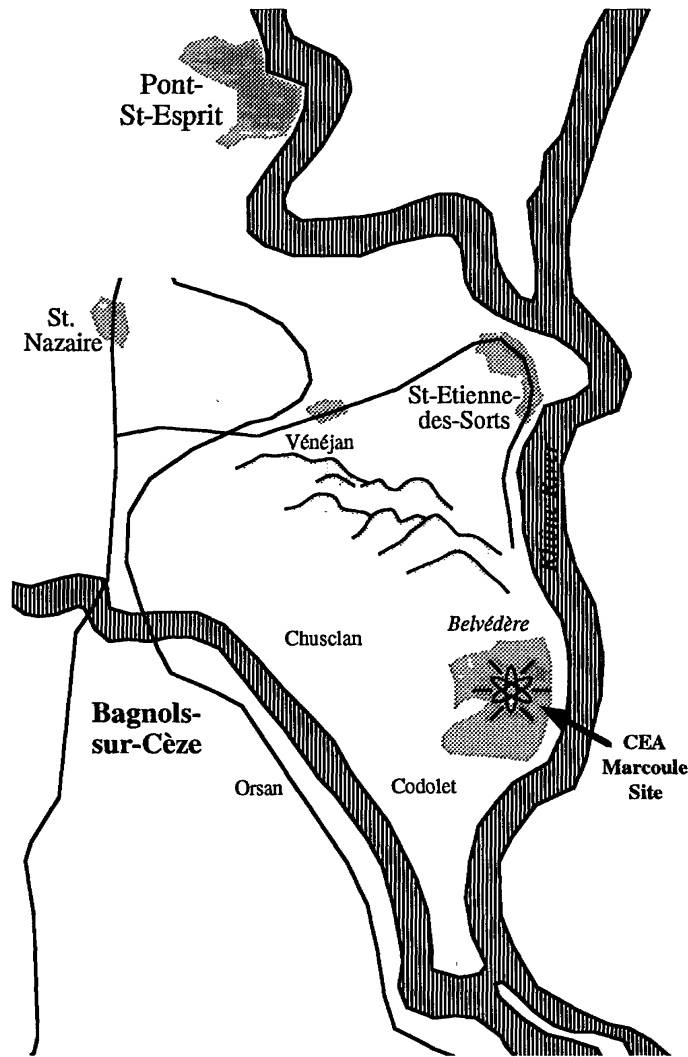
The bomb was thus a part cosmic, part transcendental spectacle, replayed in the media for all to experience. In the weeks that followed the explosion, publications sympathetic to the Gaullist *force de frappe* reaffirmed the bomb's redemptive and salvational powers. The nation could once again defend itself. The humiliation of 1940 would never happen again. France had retrieved its status as a great nation, a world power. The Reggane test had reenacted the final wartime victory of the United States, this time with France playing the leading role.

Technological development was thus a tremendous spectacle, a drama propelled by scientists and engineers, and a display of national radiance. The exalted language used to describe technologies transformed them into redemptive acts—atonements for 1940, or reenactments of the Liberation. They thus bound French nationhood to technological achievement. Some of the enactments of this show—such as appeals for more scientists and engineers—specifically sought to enroll the audience in the drama. For the most part, however, the producers of the pageant seemed to expect their audience simply to applaud, cheer, and be awed.

How did this spectacle manifest itself at the regional level? In the Gard, near the CEA's Marcoule site, the spectacle of technological radiance presented itself, above all, as a drama of regional salvation through the reconciliation of modernity and tradition. In the Touraine, near EDF's Chinon site, the spectacle was primarily a display akin to the region's châteaux, a monument for locals and tourists to gawk at and tour.

### *Reconciling Modernity and Tradition*

The central drama describing Marcoule's arrival was co-produced by CEA administrators, local leaders, journalists, and scholars. It blended national symbolic and ideological resources with regional ones. Its multiple variations generally featured the same basic plot: The economy and social fabric of the Gard had begun to decline in the early 1950s. The local coal mine had shut down, the purchasing power of consumers had decreased, wine and other local products were selling at a loss, and agricultural



**Figure 6.1**

The region around the CEA's Marcoule nuclear site (not to scale). Drawing by Carlos Martín.

workers were fleeing the land. In this dismal climate, the CEA announced that it would build France's first industrial-scale nuclear site in the villages of Chusclan and Codolet, on the banks of the Rhône. Marcoule brought new people, virtually unlimited employment, and regional modernization, all of which blended harmoniously with traditional lifestyles. A unique emblem of French technological prowess, it brought glory to the region because it brought glory to France.

A typical production of this drama occurred when a newly created Urbanism Prize was awarded to the town of Bagnols-sur-Cèze by the Ministry of Construction. With populations between 4000 and 5000, Bagnols and Pont-Saint-Esprit were the nearest sizable towns to Marcoule

(figure 6.1). Shortly after arriving in the region in 1953, the CEA discussed housing development plans with both towns. The mayor of Bagnols, the dynamic and ambitious Pierre Boulot, saw new construction as the perfect means by which to revitalize his town's economy. He eagerly seized the CEA's offer, pledging to persuade his townspeople of the wondrous possibilities of urbanization. The Ministry of Construction took charge of the project, designating an urban planner and an architect as project directors. Thus began more than ten years of urban planning and development in Bagnols.

In 1960 the Ministry of Construction decided to reward these urbanization efforts. "Is it not astonishing," it asked rhetorically, "that until now, nothing in our Country—renowned for its taste, its sense of measure, and its methodical spirit—has attracted the attention of public opinion to the originality of French solutions to urban problems?"<sup>31</sup> Creating an Urbanism Prize would remedy this shocking state of affairs and "show the personality of French Urban Planning to its best advantage." Bagnols-sur-Cèze won the prize, which consisted of a plaque, a ceremony, and an illustrated commemorative booklet that recounted the drama of its urbanization, featuring Marcoule as the saving agent of modernization. The project directors, the CEA, and the mayor of Bagnols produced the ceremony and the booklet.

The head urban planner, one R. Coquerel, focused his story on the multiple manifestations of the harmony between tradition and modernity exemplified by the new Bagnols. All the participants in the project had cooperated in its planning and in its implementation: "No one shut himself in his own preoccupations, in his own specialty: technical, financial, human and political problems were all studied together."<sup>32</sup> This collaborative spirit resulted in another kind of harmony: the equitable distribution of modern amenities. Established residents of the town would have access to the new housing. "Providing the old neighborhoods with the same equipment as the new ones is more important than over equipping the latter," Coquerel wrote. "The community is a whole: maintaining its unity is a sacred thing." Most important to him was the esthetic harmony expressed by the newly urbanized town. To illustrate his respect for Bagnols's history, Coquerel represented the "historical evolution of the town" with four diagrams that depicted the town in Roman times, in medieval times, before the arrival of Marcoule, and after the start of urban planning. The modern high-rises, "symbols and identity of the new city," expressed the "continuity of the gothic spires of the churches and the existing medieval towers, symbols and

identity of the old town,” thereby providing “organic and spiritual continuity between the two towns.”

The CEA’s contribution to the prize prose also told of harmony—claiming, for example, that the CEA had asked the villages of Codolet and Chusclan for hospitality before beginning to build the site (a claim that those villages hotly disputed). It placed even greater stress, however, on the role of the state in bringing the entire project—both Marcoule and the new Bagnols—to fruition. It narrated the importance of plutonium production for the nation, of the role that the CEA played in helping the government implement its policy of industrial decentralization, and of the enthusiastic participation of all branches of the state. Most of all, though, the CEA represented itself as the agent of modernity. Its personnel, representative of the most modern of all technologies, required the most modern of all surroundings. The CEA had therefore rescued Bagnols from the depths of backwardness: “A little town once in decline, Bagnols-sur-Cèze is now a modern . . . center where every month the [CEA] delivers . . . 1,500,000 new francs worth of salary to its employees.”<sup>33</sup>

The last word in the prize document was reserved for Mayor Pierre Boulot. His enthusiasm for the transformation of his town produced a paean to modernity. He began with an exultant list of accomplishments, including not only the construction of new housing but also the installation of sewage and running water, the dramatic increase in Bagnols’ population and birthrate, and the opening of new commerce. A list followed of future facilities, which included a stadium, a pool, a cultural center, and a much expanded hospital. Boulot then proceeded to an almost obsequious expression of gratitude to the agents of modernity (the urban planners, five different ministries, and of course the CEA). “Thus Bagnols,” he concluded, “an atomic City, a mushrooming Town, a Town integrated in the past, . . . proud of that past and of its progress, turned toward the future, salutes the promoters of an astonishing, human, and peaceful endeavor.”<sup>34</sup> Since Marcoule produced plutonium to fuel atomic bombs, Boulot’s choice of “peaceful” is particularly ironic.

State technologists and local politicians thus *together* produced a dramatic narrative in which Marcoule descended upon the region and saved it from underdevelopment and underpopulation. This story conflated technology and the state into a single agent of modernity that would complement the traditions that had sustained Bagnols over the centuries. Bagnols’s past served to situate and legitimate modern developments in a continuous, progressive regional history. The new town was but the logical and harmonious extension of the old one.



The joining of modern and traditional had been a theme of local representations from Marcoule's earliest days. In 1957 it had been performed in a spectacle that had captured journalistic imagination nationwide: the arrival of Marcoule's first heat exchanger, manufactured near Paris and transported to the site by a convoy of trucks. The national press followed this journey south for weeks, dubbing the exchanger the "atomic millipede" because of its appearance and its slow pace. As the millipede neared Marcoule on the final day of its journey, residents flocked to the sides of the road to catch a glimpse: "In Bagnols, we saw an eighty year old woman postpone an urgent trip so as not to miss the passage of the engine. 'I want to see the atomic bomb,' she said to whomever would listen. And when she learned that there was no bomb, and that there was no need to fear an explosion, she appeared horribly disappointed."<sup>35</sup> The atomic millipede approached the bridge of Codolet, the final hurdle before the site. The bridge, more than a hundred years old, had not been designed to accommodate a monstrous modern machine; to make matters worse, there was a tight curve in the road just before the bridge. Taking several hours, the convoy driver inched the millipede through the turn and across the bridge, making a grand entrance into the village of Codolet. There, a charming young couple came forward to greet them. Bursting with eagerness, Parisian journalists dubbed them "the atomic fiancés." This episode symbolized the way that traditional structures such as the Codolet bridge accommodated modern technology. Parents could encourage children to reenact this accommodation by purchasing a toy atomic millipede, painted in the colors of the French flag.<sup>36</sup>

The drama of Marcoule also rehearsed and updated the centuries-old tropes of young, male, modern France versus old, female, traditional France—also manifested as civilized Paris versus the savage provinces.<sup>37</sup> According to regional geographer Alfred Chabaud, such contrasts were evident every day in the villages around Marcoule:

Saint-Nazaire well illustrates this evolution that associates village with new neighborhood, past with present. Next to the aging, predominantly female indigenous population there is now a foreign element, composed primarily of young men. This transformation of the village into a suburb brings change: faced by the city, the field retreats; the rural world gets submerged by the white-collar workers. These transformations occur without resistance by the primitive environment and without aggression on the part of the newcomers.<sup>38</sup>

Just as French colonialists had gone on a civilizing mission to Africa, so contemporary industrial missionaries brought modernity to the "indigenous," "primitive" population of rural France.<sup>39</sup> This encounter occurred

with perfect harmony: “[We see] a curious juxtaposition in this society: a rural mass, groups of blue and white-collar workers, and an elite of technologists. This encounter of such diverse elements in the same place can secure the link between scientific thinking and work in the fields, attach the factory to the earth, and perhaps renovate the soul of the village.”<sup>40</sup> The persistence of an agricultural society would root the new factories in the soil of tradition. But harmony also came because peasants embraced modernity. Chabaud claimed that the progressive spirit brought by the atom had begun to permeate agricultural thinking. Proof of this, for him, lay in the dramatic increase in the number of tractors in the region and in the greater attention being paid to irrigation and other technologies: “Everywhere in this environment still prisoner of its routines and structures, a will to act is born that brings with it movement and life.”<sup>41</sup> Thus, Chabaud concluded, modern industry could free rural France from the fetters of primitive routines. Agriculture would undergo a transformative experience, a massive rejuvenation. Modernity, at last, was within the reach of the French peasant.

The story of Marcoule was most often produced as a drama, but this drama also incorporated elements of display. As objects on display, the reactors provided a breathtaking spectacle. One local journalist appeared to have a transcendental experience upon beholding the reactors for the first time:

From the very first glance, the enormous dimensions of the buildings that contain the [atomic] piles strike us dumb. These are two cathedrals of steel, 60 meters high, 40 meters wide, and 72 meters long—in other words, about the same dimensions as the nave of Notre Dame. Inside, one could easily fit three Arcs de Triomphe. . . . The pile itself is in the form of an enormous cylinder of prestressed concrete, 20 meters in diameter and 34 meters long. It is held together by steel cables. . . . Each cable is capable of supporting a weight comparable to that of the Eiffel Tower.<sup>42</sup>

This passage was written as though these thoughts had occurred to the author as he gazed upon these magnificent machines. The national press, however, used the same language. From the daily *Le Figaro* to the monthly popular science magazine *Science et Vie*, journalists described Marcoule’s reactors as cathedrals and compared them to national monuments in the same terms.<sup>43</sup> We can surmise that the CEA itself had suggested these comparisons to journalists, either in a press release or at one of the few press conferences held at the site.<sup>44</sup>

Regional papers, scholars, and officials appropriated these metaphors in an utterly un-self-conscious, non-ironic manner in order to re-imagine

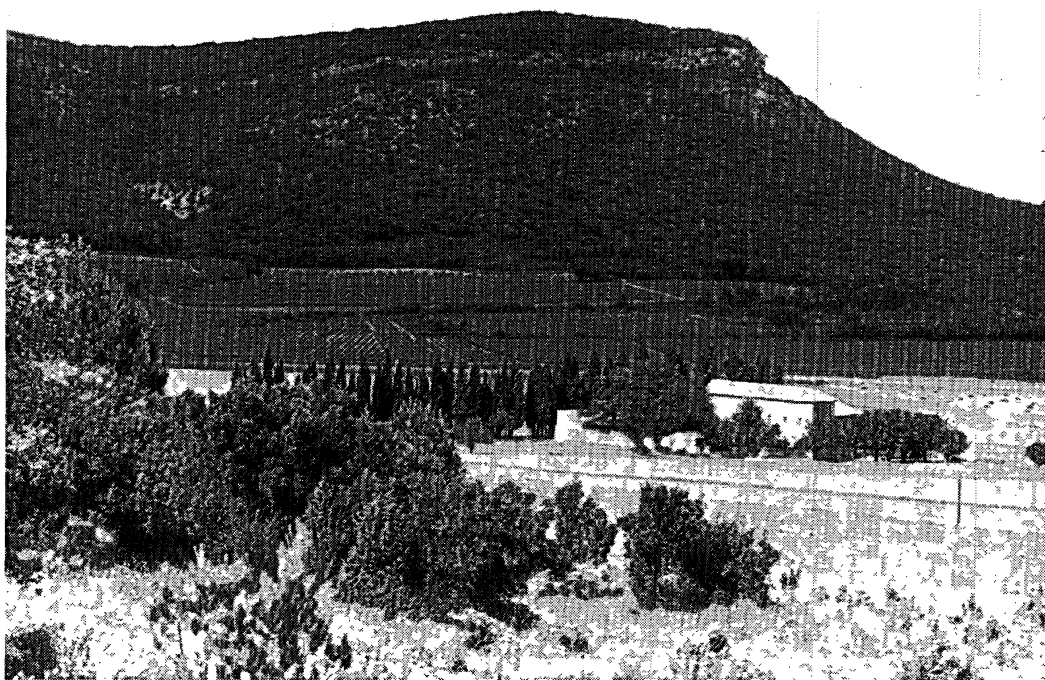
the relationship of their region to the nation.<sup>45</sup> Alfred Chabaud offered this description in his analysis of Marcoule's socio-economic effects:

As of today, France has realized a cyclopean achievement that prefigures the immense possibilities of the atomic era. . . . Built as an amphitheater, very picturesque and imposing to see from afar, the factory launches itself forward like a *hymn* to the *glory* of industrial creation.

It would be up to an engineer to describe the G1 pile housed in an immense concrete *cathedral*. . . . Nothing can match the view of the cooling tower, shooting straight up in one 95 meter bound, *haloed* by its *shimmering* collar in the intense luminosity of the sky.<sup>46</sup>

Spiritual metaphors thus acquired local meaning. The Gard now housed a monument to surpass all monuments. Marcoule could compare to the most resplendent Parisian symbols of the nation. Notre Dame, the Arc de Triomphe, and the Eiffel Tower—traditional monuments to French religious, military, and cultural glory—lent their symbolic power and legitimacy to the nuclear reactors. Far from negating France's glorious history, these modern monuments represented the next logical step in that history. The quintessence of Frenchness no longer resided exclusively in Paris; it now existed in the Gard as well. The department would bathe in the light cast by the French atom: "Marcoule will give the Gard of tomorrow a national radiance that coal could have never brought," proclaimed the president of a local chamber of commerce, explaining that, whereas reliance on coal had led to severe economic problems, the presence of the atomic site would guarantee the industrialization of the entire region.<sup>47</sup> Over and over again, the nuclear industry appeared in the regional press of the mid to late 1950s as the potential or actual savior of the region.<sup>48</sup>

The quintessential manifestation of this reconfiguration lay in the expected transformation—thanks to Marcoule—of the region into a tourist destination. The site itself had esthetic qualities well worth viewing. *Le Midi Libre* assured its readers that the CEA "intends to prove that a big modern factory is not a prototype of ugliness, of drab uniformity that generates boredom. . . . The main evidence for this concern to flatter the eye is the choice of bright colors for the outside walls—green for the plutonium factory, ochre for the G2 and G3 piles—the installation of modern street lights with curious, conical lampshades, [and] the installation of a tourist belvedere on the Dent de Marcoule."<sup>49</sup> Indeed, although visitors could not tour Marcoule as they could other French monuments, the belvedere so thoughtfully built by the CEA provided a spectacular view of the region. This belvedere was celebrated not only in pamphlets put out by the CEA but also in the local press and in locally produced tourist



**Figure 6.2**

The Dent de Marcoule in the early 1950s, before the arrival of the nuclear site.  
Source: CEA/MAH.



**Figure 6.3**

The view from the belvedere in 1968. Source: CEA/MAH/Jahan.



Figure 6.4

Scenes from the comic book *Bruno et Sophie au pays de l'atome* (*Bruno and Sophie in the Land of the Atom*). Ordinarily, tourists and residents could not take an actual tour of Marcoule. At best, they might experience the virtual tour offered in this comic book. In the comic, Bruno and Sophie (both around twelve years old) mischievously break into Marcoule to satisfy Bruno's curiosity. ("Seeing that amazing factory every morning without knowing what goes on there is really getting to me!") They are caught by a man who looks remarkably like Francis Perrin (the CEA's scientific head, not normally at Marcoule), who takes pity on them. He assigns Mr. Timoléon, a clumsy and absent-minded scientist with big glasses and a beard, to show them around and explain the mysteries of the atom. Timoléon takes them on a tour of the site, showing them everything except the plutonium factory (off limits even in the virtual tour) and asserting that radiation is not inherently dangerous. Timoléon's clumsiness and the children's antics are evidently intended to provide humor, but most of the dialogue in fact supplies a rather serious (if highly glossed over) explanation of Marcoule's activities, together with earnest reassurances about its safety. Source: J. Castan, *Bruno et Sophie au pays de l'atome* (no date or publisher listed). Courtesy of Jacques Bonnaud.

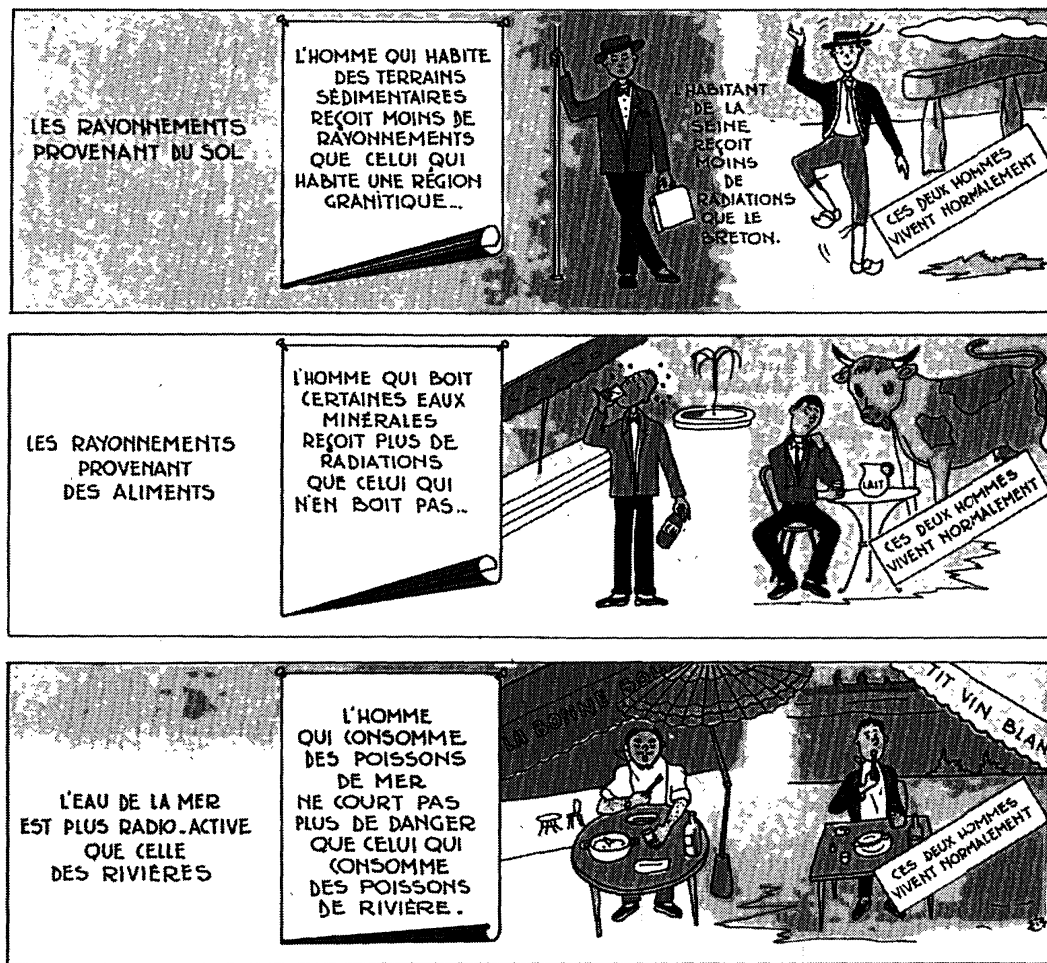


Figure 6.5

More scenes from *Bruno et Sophie au pays de l'atome*. These images accompany Mr. Timoléon's explanation of why radiation, properly handled, is safe. The basic gist of the explanation is that radioactivity exists in nature. In these panels, archetypal French male figures represent inhabitants and consumers who receive differing amounts of radioactivity. The first panel contrasts a resident of the Seine (a Parisian) with a resident of Brittany, the second a man who consumes mineral water with one who drinks milk, and the third a man who eats fish from the sea with one who eats fish from rivers. In all three cases, the panels proclaim, both men "live normally." Courtesy of Jacques Bonnaud.

brochures.<sup>50</sup> Thus a modern landscape of the Gard was constructed. From the new vantage point, the site of Marcoule dominated a panorama bordered on one side by the Rhône and peppered throughout with quaint villages and fine vineyards. The new landscape provided yet another way for the modern and the traditional to coexist in esthetic harmony.

Local officials hoped that the distinctiveness imparted to their region by Marcoule would attract visitors. A glossy booklet published by the depart-

mental services of the Gard in 1964 recommended, in its description of Bagnols, an itinerary on which tourists could view Marcoule from the outside.<sup>51</sup> (Except for the occasional press conference or the even rarer tour for local officials, the site was off limits to all but those who worked there.) Those who wanted a special souvenir of their visit to atomic France could even purchase a bottle of *Cuvée de Marcoule* Côtes-du-Rhône, the crowning symbol of a perfect fusion of tradition and modernity, commissioned from the vintners of Chusclan by Marcoule's administrators.<sup>52</sup>

Spectacles that displayed the harmonious marriage of tradition and modernity did more than simply offer an interpretation of regional modernization. They also became a political and economic tool for local officials. For example, Mayor Boulot evoked the narrative whenever he asked the Bagnols town council to approve tax increases to pay for new, modern facilities. Such evocations drew upon the dramatic themes elaborated earlier. In 1962, for example, Boulot reminded the councilors that Bagnols represented the perfect reconciliation of tradition with modernity:

This evening, your Finance Commission presents you with a budget that pretends to nothing except a wish to be reasonable.

It is indeed difficult, you may say, to know where reason lies. Some would seek it in the tranquil and comfortable place of the man who, after a life of labor, calmly awaits the end of his days. It is no longer time for him to plant, nor even to build. He is content to keep up the old furniture that he received from his family, and to give the trees he planted in his youth the care they need in order to produce as much fruit as possible before his death.

Doubtless his house is comfortable and his orchard old, but what does he care? Those who come after him can work things out for themselves.

Others, on the contrary, feel that one must think about those who come later. This would be the idea of the old industrialist who only manages his business for his son; he abandons his old factory, which he deliberately let fall to pieces, in order to construct new workshops, equipped with the latest machines. Little does he care that the familial house has a few rotten beams and peeling paint, since it will no longer suit the next generation, and since for him reason only lies in what is projected for the future.

"In medio Stat Vortus" [*sic*] said the wisdom of the ancients, and it is in this happy medium that we have tried to find reason.<sup>53</sup>

Boulot used these fables to argue that what was right for Bagnols was the "happy medium," the perfect harmony of modern and traditional values. His budget, he said, requested only those amenities needed to produce such harmony. He intended to carry Bagnols forward on the path cleared by the forces of industry and modernity without giving way to excess or sacrificing the values that they all held so dearly. Throughout the 1960s,





**Figure 6.6**

The mayors of the towns and villages around Marcoule on a rare visit to the site. Courtesy of Mireille Justamond, Bagnols-sur-Cèze municipal archives.

Boulot continued to draw upon these themes in order to push through his development programs.<sup>54</sup>

### *Châteaux for the Twentieth Century*

The spectacle of nuclear development in the Gard took the form of dramatic narratives in which modernity became reconciled with tradition in order to save the region from decline. As objects of display, the reactors were to be gazed upon with awe from afar. In the Touraine, however, the spectacle of nuclear development primarily took the form of a display that could—at least on the surface—be examined more closely than its Gardois counterpart. The producers of this show in the Touraine appeared most concerned with harmonizing modernity and tradition in a visual esthetic.

Tourangeaux officials initially expressed more caution than their Gardois colleagues at the prospect of a nuclear site in their region. They too felt that their region was in decline. They particularly deplored the state of housing, the decline in population, the “decrepit” telephone sys-



tem, and the “seriously neglected” development of television. The only major economic event near the town of Chinon since the end of World War II had been the construction of an American military base. The base had hired local residents for construction and service jobs, but officials feared a surge in unemployment with the completion of the facilities. Still, the Touraine did not face the strikes and massive unemployment problems that the Gard experienced due to the decline of its coal mines. Most local leaders expressed only cautious enthusiasm for proposals to lure industry into the region.<sup>55</sup> In departmental meetings and in the regional press, the traditional qualities of life in the Touraine—the gentle landscape, the abundant produce, the wonderful wines—were repeatedly lauded, even while pointing to their uneasy fit with a modernizing nation. For example, while the regional newspaper *La Nouvelle République du Centre-Ouest* worried about the decline in population and its implications for the economic resurgence of the Véron (the area delineated by Avoine, Beaumont, and Savigny), it also idealized the ways of life there. As they had in the Gard, female inhabitants of the Véron incarnated traditional France: “The Véronaise woman is self-sufficient. She has her meat, her milk, her vegetables, her grains, her fruit, her fowl, her rabbits, her potatoes, her fodder, her roots, her wood, and her wine”—all foodstuffs of which François Rabelais, a native son of nearby Chinon, would have approved.<sup>56</sup> Yet despite this self-sufficiency, young people continued to flee the land. The traditional lifestyle could not endure much longer. The very diversity of the produce made the mechanization of agriculture difficult, and the scarcity of roads and lack of a railway station inhibited contact with the outside world. Unless something were done, modernity would pass the region by and tradition would disappear—by sheer attrition—into oblivion.

The Indre-et-Loire’s general council created a committee to investigate and implement plans to lure industry to the region in the hopes of addressing such issues.<sup>57</sup> Yet the continued discomfort of departmental representatives with industrial development became evident when the prefect announced, in early 1956, that EDF was considering the Véron for its first nuclear site. Most officials reacted with tempered interest. The site promised to provide the kind of economic boost they sought, but they expressed concern about the potential dangers from radiation (an issue which Gardois officials did not raise). The prefect sought to comfort them on this score, reporting on two recent information sessions held by EDF. Specifically, he noted, “we have been amply assured that the water . . . needed for the cooling operations, will not, upon its evacuation into the

Vienne (or the Loire), have damaging effects either on water use or on the fishing folk. Fishermen will even appreciate the slight heating of the water.”<sup>58</sup> He went on to assure the representatives that EDF wanted to establish a regional development plan in conjunction with local officials. He concluded with what he evidently intended to be the coup de grâce: “We might even think that this development could be the source for a new kind of tourism, since it will [attract] . . . researchers and developers from many neighboring nations.” Auguste Correch, Chinon’s mayor, expressed the greatest enthusiasm. He immediately lent his support to the prefect’s proposal, adding only his fervent desire that steps be taken to ensure that the new plant would “not detract from the beauty of the site.”<sup>59</sup>

As Correch’s comment suggests, the desire to achieve a certain harmony between tradition and modernity had different manifestations in the Touraine than in the Gard. The differences, I believe, stemmed from the fact that tradition itself had different meanings in the Touraine. In both regions, the notion of tradition evoked village lifestyles and ties to the land. In addition, however, the Tourangeaux tied tradition to national history. The Touraine’s history derived much of its meaning from its role in national history, thanks to the presence of numerous landmark châteaux. Commemorating this history had economic as well as cultural significance, since tourism to these châteaux provided a significant source of income. Even smaller châteaux, such as the one at Chinon (site of the legendary scene in which Joan of Arc recognized the legitimate king, who stood disguised among the members of his court), received a steady 70,000 visitors a year. And less ostentatious sites such as La Devinière (Rabelais’s birthplace) and the ruins of the château de Bonaventure (site of the famous love affair between Charles VII and Agnès Sorel) attracted more adventurous tourists.<sup>60</sup> Community leaders proudly noted that France’s medieval and renaissance monarchs had prized their region’s mild climate and gentle landscape. Preserving this landscape was thus a priority. In sum, esthetics and tourism provided the fundamental parameters by which Tourangeaux officials understood and described their region. These, consequently, were the primary terms they applied to the arrival of nuclear technology in their midst.

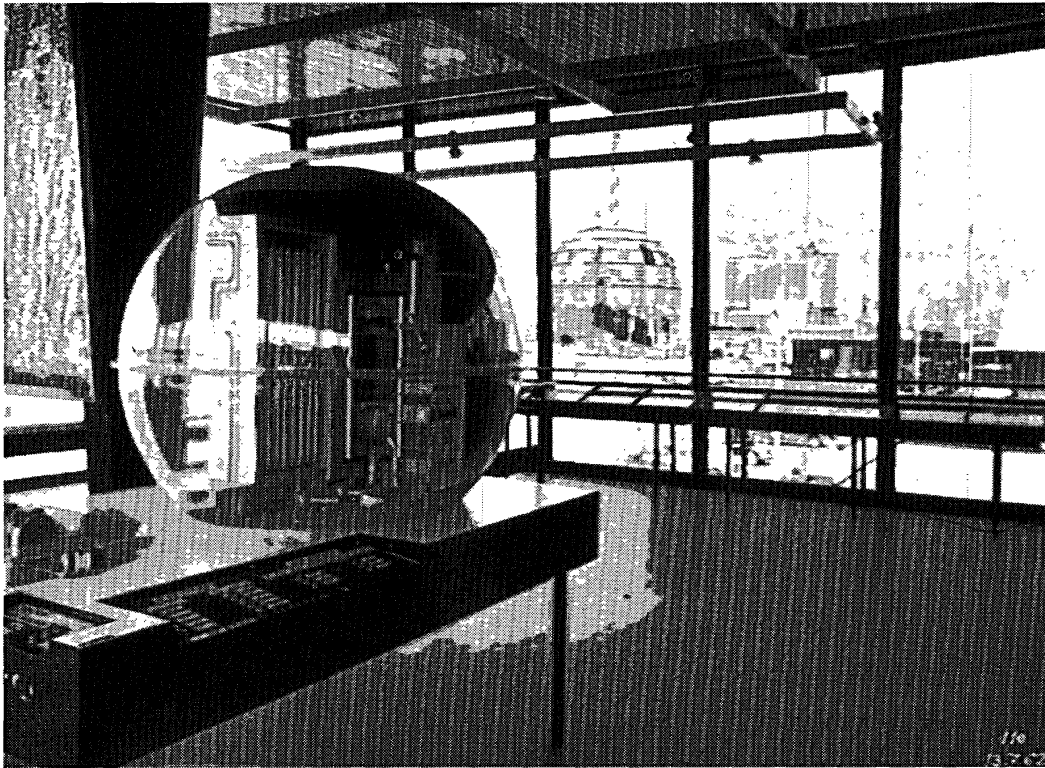
Ultimately, esthetic considerations concerned local officials more than safety issues. EDF’s initial intent to locate the site at the confluence of the Loire and the Vienne alarmed people who felt that location afforded one of the most beautiful views in the region—one that on no account should it be marred.<sup>61</sup> Many breathed a sigh of relief when EDF announced that it would select a site a few kilometers downstream instead. Clearly, EDF had

begun to understand the value of addressing local concerns. Though the move had been prompted by the results of a geological survey, in a meeting with local officials an EDF envoy also cited esthetic considerations.<sup>62</sup>

The move did not assuage all esthetic anxieties, however. The new site, in the territory of Avoine, might not have the same view, but officials still worried about the plant's effect on that landscape. Michel Debré (who would later become de Gaulle's prime minister) remarked in one meeting that it was essential to "protect the traditional face of sites and villages around [the site]."<sup>63</sup> The architect of the department's siting commission cautioned EDF against a hasty design project. He noted carefully that though he did not oppose modern edifices in principle, he wanted to ensure that the site would blend harmoniously with the landscape. The new building, he wrote, "should look like a very twentieth-century building, functional and esthetic at the same time. Indeed, it is conceivable that this installation will attract tourists more strongly than many other buildings and that its general appearance, while taking economics into account, should be adapted to the new and somewhat sensational interest raised by the use of nuclear energy. There is, in this regard, a very avant-garde project to establish which I will be very interested in examining. . . ."<sup>64</sup> The architect did not get approval rights on the site's design, but he and others were doubtless relieved when they learned that the housing developments for site employees would be designed by a Touraine architect using traditional materials, such as white stone and slate.<sup>65</sup>

As the reactor slowly took shape, community leaders appeared to accept the new industrial esthetic. In 1959 one journalist commented that "the department is very rich in tourist sites, and would not accommodate unesthetic installations with chimneys spitting out black smoke." The "sober lines" and "neat layout" of the site worked well in the landscape. And, fortunately, a landscape architect had "planted magnolias and linden trees in great quantities in order to ease the transition between nature and machines." Indeed, the journalist went so far as to call the reactor a true "twentieth-century château," an "exalting spectacle," and "100% French."<sup>66</sup> Marcoule may have been a cathedral (even *La Nouvelle République* described it as such<sup>67</sup>), but in the Touraine no metaphor could signal appropriation better than that of the château.<sup>68</sup>

Local officials and journalists conceptualized the Chinon reactors as châteaux first. Eventually the site's managers realized that they could turn this metaphor to their advantage: the nuclear site, like a château, could become a tourist destination, complete with guided tours. Beginning in 1958, tours were conducted on Sunday mornings. A



*Figure 6.7*

A small, museum-like display that greeted visitors who came to tour the Chinon nuclear site. Beginning in the mid 1960s, guides used this simple model of EDF1 to explain how the reactor worked. Photograph by H. Baranger. Source: EDF Photothèque.

*Nouvelle République* journalist who had taken the tour told prospective visitors what they could expect<sup>69</sup>:

You stand in line to go inside. While waiting, the public goes to look at the large poster that depicts the finished plant: the ball is EDF1, . . . the cylinder is the water reservoir. . . . A mother hesitates, and then tells her son, “you go ahead, you’re the only one who can understand any of that.” In the end, the mother, the father, and the son go inside; the daughter will wait in the car. Like certain movies, though for other reasons, the Plant is off-limits to those under 16. And together with the adolescents, you have to leave cameras at the door.

Once inside, a guide took the tour group around the site, explaining how the reactor would work and patiently defining technical terms. Despite the analogy to other tourist destinations, this monument clearly elicited different responses from visitors:

The tourist-students do not yet ask any questions. Shyness, or fear of ridicule? It’s one thing to ask the name of a painter or the style of an arm-chair in a château. It’s quite another thing to venture into enriched uranium or the role of CO<sub>2</sub>!

A big guy, who probably works with a monkey wrench during the week, raises his hand: “How many kilowatts? And when will the construction be over?” “First pile [reactor]—end of 1959, 60,000 kW; Second pile—1961, 170,000 kW; Third pile—1965, 250,000 kW.” He acknowledges the response with his cap, and turns to his wife: “Talk about a big job!”<sup>70</sup>

As they proceeded around the site, several more visitors asked questions. The tour guide volunteered some information about protection against radioactivity, calling particular attention to a concrete barrier nearly 3 meters thick—“a wall,” notes the article, “which evokes the Middle Ages.” The second reactor under construction, though it did not have the same appeal as the spherical EDF1, was still pleasing to look at, with “modern architecture, large windows, and brightly colored panels.” As they left, members of the first tour group were accosted by a second group eagerly waiting outside—just like at the châteaux.

Making EDF1 and EDF2 into the Touraine’s twentieth-century châteaux served to endow the nuclear site with a regional flavor. In so doing, local officials and the press made the site local. At the same time, they redefined and updated the relationship of their region to the nation. One article put the matter succinctly: “The Touraine, already proud of having outlined on its soil a large part of the History of France, writes another grandiose page [of this history] with the birth of EDF1, the first thermonuclear plant on the banks of the Loire.”<sup>71</sup>

EDF, for its part, fully cooperated with this appropriation. Not only did the utility offer site tours; it also sponsored (in conjunction with departmental authorities) an atomic exhibit at the region’s annual fair, the Grande Semaine de Tours. In 1958, an enormous mural erected in front of the town hall in Tours publicized the exhibit, depicting an abstract representation of an atom with huge circles and spheres jutting out at different angles. Inside, the public could examine scale models of French gas-graphite reactors, gaze at posters describing the extraction and processing of uranium, learn the basic principles of fission and fusion, and (of course) read about their country’s contributions to nuclear physics and technology, from Becquerel on.

EDF willingly went along with the display of nuclear power as a tourist attraction; however, it also tried to get the Tourangeaux to think in terms of the drama of technological salvation and liberation, and to consider French technological radiance more generally. The promotional literature on the Chinon site emphasized energy production, industrialization, and modernization. In its contribution to a brochure for the regional fair,<sup>72</sup> EDF sternly informed visitors that France had become the world’s

fourth nuclear power. Atomic energy would “safeguard our economic independence and our power.” EDF was working toward this end at full speed, planning an atomic plant every 18 months. The new industry would provide a splendid opportunity for young people, who could thereby make for themselves “a place of choice in the world of tomorrow.” Such were the terms in which EDF wanted the region to see itself. “France is entering the atomic era, with the Indre-et-Loire at the forefront, and it is with confidence and lucidity that our youth, and our entire department, turns toward the future.” The concluding words of the pamphlet abandoned all restraint: “It is up to the young generations, to the future engineers, technicians, and scientists, to build a new civilization: it is their luminary value, their desire for peace and social progress, on which the future of the world depends.” In EDF’s drama, therefore, France’s youth, by acquiring scientific and technological training, would save not just the future of their nation, but that of all humanity.

In a parallel vein, EDF representatives reminded residents that their region was poor in energy. An “investigative report” by EDF, published in *La Nouvelle République* a few months before EDF1 went on line in 1963, showed, on a map of France, which energy sources came from which regions. Mountainous areas provided “water” (hydroelectric dams); other regions provided “fire” (coal). Only western and west central France provided little to no energy. Fortunately, however, “the plains [of western central France] with their energetically underdeveloped rivers are propitious for these plants of our times. . . . Thus the natural energy void of western central France will be filled. In a family, it is the custom to coddle the baby; let us follow this lead [and proceed] under the emblem of EDF, which is setting the course for the energetic expansion of this region of France.” The nation’s baby in terms of energy and modernization, the region was thus being “coddled” by receiving the best and most modern energy source:

Everything points to the conclusion that central western France, allergic to industrialization for so long, is about to blossom. Bitter voices will say that it’s about time, after the progress of heavy industry last century and that of hydroelectric energy recently.

They are wrong. Nothing can be compared to the past. The future of [the region] sparkles. . . . EDF is setting the example in research, financing, investment, and development.

The reactors at Chinon were particularly laudable, “fine example[s] of Cartesianism, . . . the magnificent fruit of reason.”<sup>73</sup> By the time the third reactor went on line, a few years later, the region would actually export

energy to the rest of the nation. *La Nouvelle République du Centre-Ouest* asked “Is this not a revolution in the Hexagon?”<sup>74</sup>

Local journalists and officials imagined the Chinon reactors as twentieth-century châteaux that would restore the Touraine to its rightful place within the French nation. Though EDF administrators were happy to cooperate in this display, they also sought to generate enthusiasm for nuclear technology as a form of salvation and revolution. This too involved resituating the Touraine’s place within the nation, but in a different way. According to EDF, the Touraine, once dependent on the rest of France for energy, would now be in a position to export electricity to other regions. This change constituted nothing short of a revolution. But how much impact would this revolution have on local life? The question remained unposed.

Residents of the Gard and the Touraine were thus offered two somewhat different spectacles of technological change. In each, nuclear technology appeared as a force that would reconfigure the relationship between the nation and the region in a variety of ways. But the promise of technology for local life differed in the two regions. Marcoule promised widespread modernization that would harmonize with traditional lifestyles, offering a kind of salvation. Chinon promised esthetic harmony with the past and with the natural environment, and little else. These promises shaped the expectations that local residents had of the nuclear sites. And those expectations helped to shape residents’ responses to the arrival of nuclear reactors in their region.

### *The Critics: “Two Steps Away Is the Abyss”*

The critics of the spectacle of French technological radiance addressed both components of the spectacle: drama and display. Some did not accept the notion that nuclear technology represented salvation. Where the producers of the spectacle saw redemption, they saw “apocalypse.” Others offered more secular evaluations of technological displays. The critics included Catholic intellectuals, local activists, communists, Poujadistes, journalists, and writers.

At the national level, these critics were quite visible, though not particularly powerful and certainly not coordinated with one another. Indeed, the critiques emanating from Catholics, communists, and Poujadistes usually referred back to the central ideologies of their respective communities. Catholics argued in terms of Christian morality and against materialism; communists blamed capitalist governments for the

arms race; Poujadistes excoriated Marcoule as an agent of the technocratic state. These ideological associations probably helped to prevent the critiques themselves from being accepted at face value.

In the Gard the critics were even more marginal, though still visible. In the Touraine they seemed almost completely invisible. Nonetheless, the existence of these voices helps to delineate the spectrum of attitudes toward technological change in France. They are worth examining, if for no other reason as a reminder that the spectacle of technological radiance, dominant as it was, did not always have a completely rapt audience. More concretely, some of these critical representations—however fleeting their appearance in the Gard—made enough of an impression to be drawn into a locally produced counter-spectacle.

Starting with the first bomb test at Alamogordo and Robert Oppenheimer's legendary quotation from the Bhagavad-gita ("I am become death, the conqueror of worlds"), commentators everywhere used apocalyptic imagery to describe the terrifying destructiveness of atomic weapons.<sup>75</sup> Catholic writers interpreted the atomic bomb as evidence of the moral corruption of science. Nuclear explosions were said to signal the return of the "the old thunder of the Bible."<sup>76</sup> As David Pace has noted, "Hiroshima made ancient apocalyptic images concrete, and the new threat of destruction soon became intertwined with the church's moral crusade against materialism."<sup>77</sup> Just as advocates of large-scale technological development evoked the religious language of salvation and redemption to give their plans higher moral purpose, Pace argues, Catholic conservatives placed the destructive potential of science and technology in an apocalyptic framework—in part to assert their own moral rectitude.

Catholics were not the only ones to evoke the apocalypse when contemplating atomic energy. Nuclear technology was the focus of real and widespread existential anxiety about humanity's future, particularly in the late 1940s. Writers expressed their concerns in books with titles such as *Atomic Energy or Calamity?*, *Atomic Bomb: Toward Total Destruction or Heaven on Earth*, and *The End of the World or the Golden Age*.<sup>78</sup> Although such publications grew less popular in the 1950s, apocalyptic imagery continued to appear, particularly in the increasingly rare publications on the dangers of radioactivity. In 1957 *France-soir* ran a series titled "Is atomic radiation preparing our collective suicide?"<sup>79</sup> The first few articles discussed the personal risks run by the heroes (including the scientists Henri Becquerel and Pierre Curie) and the victims (such as workers who adorned watch dials with radioactive paint and residents downstream from a uranium mine who fished radioactive pike from their rivers).<sup>80</sup> Some of these people



appeared as martyrs—including a man who prepared samples of medical radium for years until he himself became radioactive (at least according to *France-soir*). The series expressed continued ambivalence as to whether the benefits of the civilian atom outweighed the risks. But the language it used to describe the military atom was unequivocal: “We are at the threshold of the Apocalypse.”<sup>81</sup>

The few articles about atomic risks in *France-soir* and other mainstream publications did not appear to be connected to a general editorial policy. As we have seen, *France-soir* published far more articles evoking the salvational powers of modern technology, and its coverage of Reggane was obsequiously reassuring about the utter harmlessness of the bomb test. The popular science monthly *Science et Vie* seemed to have a more consistent editorial policy, condemning foreign and French nuclear weapons alike. It too used doomsday language (“apocalypse in one-one-hundred-millionth of a second”), but it also gave its readers precise parameters for the final catastrophe. “The smallest [bomb] is already a monster,” read the heading of a table that showed bomb tonnage along one axis and radius of destruction along the other. Four well-placed 100-megaton “superbombs” would annihilate France.<sup>82</sup>

In articles and drawings, the satirical weekly *Le Canard enchaîné* expressed outrage and fury while offering comic relief. In 1957, a special supplement was devoted to atomic matters. One cartoon featured a group of men sitting around a conference table perched atop the earth. The southern hemisphere had been blown off, and the northern half of the planet was floating through space. One man announced to the others: “Gentlemen, I have the honor of informing you that according to this referendum, 13% of humanity is in favor of a thermonuclear truce, 12% are against it, and 50% have no opinion.” In the accompanying article, the commentator lambasted science, religion, and politicians in typical *Canard* prose:

The sources of spirituality have run dry. The scarecrow God, barely good enough to scare the canaries, has been knocked down while the crows have gorged themselves. Falsehood has been banished, but no Truth has come to take its place. The necessary demolition of superstition, absurdity, and fanaticism has been accomplished, but it has left us face to face with the infinite, the inexplicable, the incomprehensible. Man, the thinking robot, cured of his visions, has lifted himself up again, blind, in the middle of a hodge-podge of knowledge that brings him not an ounce of certainty. The saints have failed. . . . To whom, to what can we turn? The stupidity of the other God made us laugh; the intelligence of yours makes us fearful, you cardinals of Hate. All science, in your paws, becomes the weapon of a crime. You draw a thunderbolt from all light, agony

from all energy. . . . You have tied humanity to the atomic chair, and your childish executioners are playing with the throttle: "do you dare us?"

Well. WE DARE YOU! SHIT! Let it all blow up! . . .

Let's erase everything, but above all let's not start over! And let the cold, bloodless planet Earth finally roll without life, without thought, head cut off from the great Everything, in the basket of silence.<sup>83</sup>

Prophets denounced the false salvation of atomic energy at the regional level too, though written traces of their words and actions are extremely rare. Residents of the Gard remember Lanza del Vasto, a mysterious self-proclaimed acolyte of Gandhi and Hinduism who had founded a commune dedicated to nonviolence. Even before the arrival of Marcoule, del Vasto had preached against the domination of technology over nature. In 1956 he began to stage regular protests against Marcoule.<sup>84</sup> In June 1958 these culminated in a fifteen-day hunger strike protesting the French atomic bomb decision. The flyer del Vasto and his seventeen supporters passed out during this strike evoked spiritual passion equivalent to what we have seen at the national level:

Our fasting is the waiting and the suffering of the whole world in front of these buildings in which the life and death of all gets discussed, in which the death of the whole world gets premeditated and prepared.

The next nuclear conflagration: hundreds of millions of victims, some of whom will be annihilated in one instant, others of whom will see themselves consumed over a slow fire for dozens of years. As for which people will suffer the greatest blows, "that," say the experts, "will depend on the direction of the wind." . . .

Atomic testing is war against our born and unborn children. . . . Given this truth, it does not matter whether one is right or wrong, strong or weak, victor or vanquished.

All that matters is that we open our eyes onto this evidence: *In front of us, two steps away, is the Abyss.*<sup>85</sup>

Lanza del Vasto may have been Hindu, but surely most of the Gardois who read this flyer envisaged Catholic representations of hell and purgatory. Perhaps the language of this flyer responded ironically to representations of the reactors as cathedrals; perhaps del Vasto deliberately meant to suggest that nuclear knowledge led to the same fate as Catholic zeal. Or perhaps he merely meant to scare his audience. With such a scant written record, it is difficult to know. In any case, most Gardois apparently dismissed del Vasto and his ideas, even as they remembered him with fondness as a local nut who had provided a good measure of entertainment. The Touraine also had a religious figure who denounced the local nuclear site. His story is even more elusive than that of Lanza del Vasto: some say

he was a priest, others a monk.<sup>86</sup> Local residents did not seem eager to remember this type of opposition.

France's technological spectacle had secular critics too. Of these, only the attacks published by science and technology reporters in *Le Monde* and *Science et Vie* really worried the technologists of the nuclear program. Starting in the mid 1960s, a journalist named Nicolas Vichney began publishing extensive critiques of French nuclear development in *Le Monde*. In particular, he attacked the CEA's development policy and the technical capabilities of private contractors. Meanwhile, *Science et Vie* eschewed the nationalist language favored by so many others in the media. While it certainly painted most science and technology in a positive light, it also frequently criticized the patterns of atomic energy development in general and France's program in particular. It did not necessarily oppose civilian nuclear energy—in the late 1960s, for example, its journalists expressed high hopes for the potential of breeder reactors. But its writers did think that scientists and engineers had made rash promises about the potential of atomic energy. On the occasion of the second Geneva conference for the peaceful uses of atomic energy in 1958, for example, Jean Boiset noted acidly in *Science et Vie* that thus far nuclear reactors had only produced extravagantly priced "caviar electricity."<sup>87</sup> The CEA's Marcoule reactors had proved particularly disappointing. Boiset echoed the monumental language used by the CEA and much of the media, but gave it a derisive spin. G1's cooling tower was "a 95-meter minaret topped by a lampshade." G2 may have been housed in a cathedral that could contain three Arcs of Triumph. But so what? All it produced was plutonium. G2 was "a marvelous stove which you only turn on to gather some precious slag (which isn't good for anything anyway) and which only incidentally heats things up a tiny little bit." It was in response to such articles that the CEA stepped up its public relations efforts.<sup>88</sup>

The weekly *Canard enchaîné* showed little mercy toward Charles de Gaulle and his displays of grandeur. The front page of the first issue after the Reggane explosion was covered with amusing barbs. One cartoon, entitled "le champignon de Paris" (a reference to a type of mushroom), showed de Gaulle handing a mushroom cloud to a group of men dressed as chefs but identified as the nation's top "technocrats" (and including Pierre Guillaumat): "Make a whole dish of these," says the general imperiously.<sup>89</sup> One headline punned on the infamous "l'état, c'est moi": "L'éclat, c'est moi!"<sup>90</sup> The irresistible accompanying text was even more cutting:

This bomb has liberated France—what am I saying—it has liberated the French from a complex. Better still, [it has liberated] the old Gallic rooster that we all carry in our hearts and which hasn't dared to show itself since 1940. . . . This bomb, oh Frenchmen, this bomb is the most beautiful day of our lives. Saturday February 13 marks the beginning of a new era. . . . Do you not feel completely different since that day, since that minute, since that second? You do, don't you? Before, in the eyes of the world, we were only a people like any other, neither better nor worse. After: we are, in our own eyes, a superior people. Superior to how we'd imagined ourselves. Before, we were only the first non-atomic power. After: we are the fourth atomic power! Before: our good American allies refused to share their secrets. After: it's our turn to have secrets. Nah nah nah nah nah!<sup>91</sup>

*Le Canard enchaîné* also regularly poked fun at the historical continuities that de Gaulle and others drew between the regal French monuments of the past and the technological prowess of the present. In one 1966 cartoon, de Gaulle appears dressed like Louis XIV, gazing down a long esplanade of manicured trees. At the end of the esplanade, where Versailles would have a fountain, stands a mushroom cloud. The “king” tells his minions: “Le Nôtre, my dear architects, did not foresee this grandiose perspective; it is up to you to design it.”<sup>92</sup> Some commentators, at least, had a sense of humor about French technological radiance.

More sober political critiques of France's technological spectacle came from the communist daily *l'Humanité*. Opposing nuclear weapons—particularly, though by no means exclusively, French ones—was a major priority for the Communist Party from the 1940s on. Hélène Langevin, daughter of Irène and Frédéric Joliot-Curie and herself a scientist, followed in her parents' footsteps after their deaths and spoke out against nuclear weapons at numerous rallies and congresses sponsored by the Communist Party.<sup>93</sup> As we saw in chapter 4, communists challenged the equation of nuclear weapons and national grandeur. They argued that French grandeur would be better served by making the nation the foremost developer of peaceful atomic energy. In addition to asserting this frequently in the pages of *l'Humanité*, the party also staged its own spectacles to convey this message, including one in Bagnols-sur-Cèze. According to *l'Humanité*, 5000 people gathered in Bagnols's amphitheater on a cool fall day in October 1959 to hear scientists, party leaders, and even Lanza del Vasto condemn French military nuclear development. Even *l'Humanité* admitted, however, that most of the audience had traveled to Bagnols from elsewhere.<sup>94</sup>

As I noted in chapter 1, more criticism of the technological spectacle came from the opposite end of the political spectrum: the extreme-right Poujadiste movement. Nîmes, the capital of the Gard, had an active

Poujadiste group, which published the weekly newspaper *L'Echo du Midi*. Since *L'Echo* specifically targeted Marcoule in its tirades against state power and technocratic elites, it requires a closer look.

*L'Echo* opposed Marcoule not so much because of its nuclear features as because the site embodied the evils of state intervention. In mid 1957 the paper began to run a regular column, entitled “La Tribune de Marcoule,” that regularly attacked the site and its administrators. In an otherwise discordant political confluence, some stories paralleled revelations by the CFTC/CFDT labor union—such as the articles which revealed that the CEA refused to let the Ministry of Labor inspect Marcoule.<sup>95</sup> Other articles denounced the drama of regional salvation performed by local and site officials. The claim that Marcoule would lure other industries to the Gard was a hoax; the region derived no special advantage from housing the nuclear site.<sup>96</sup> Several columnists worried that the site would emit harmful radioactivity.<sup>97</sup> One writer noticed that, contrary to earlier announcements, the reactors there produced not electricity but plutonium.<sup>98</sup> All these stories carried the same punch line: the state and its technocrats had duped the people.

*L'Echo* expressed outrage not only about Marcoule itself but also about the ways in which other local journalists wrote about the site and about their cozy relationship with the CEA technocrats. One columnist sharply criticized the opening of Marcoule’s belvedere as a tourist event. Better places to admire the countryside existed than the viewpoint of an atomic factory, he noted, deriding one mainstream journalist’s suggestion that the belvedere be awarded three Michelin stars. Moreover, the comparison made between Marcoule and cathedrals deeply offended religious men such as himself (most Poujadistes were Catholics).<sup>99</sup> The journalists of *L'Echo* attributed the fanfare about Marcoule to the CEA’s courting of the local press. Marcoule’s administrators had held a sumptuous dinner for regional and national journalists. Apparently, however, *L'Echo*’s journalists had not rated an invitation. No matter: “This only makes us more free in this column, where our information will never be gathered between the fruit course and the cheese course, in the euphoria of Tavel gathered from the deep recesses of the wine cellar.”<sup>100</sup>

For *L'Echo du Midi*, Marcoule, its technocrats, and the bureaucrats who supported the project represented not the salvational power of modern technology but the evils of a state-directed economy and industry.<sup>101</sup> Apparently, however, the attitudes held by the paper did not make it into the mainstream of regional discourse about Marcoule. The other local papers never cited *L'Echo*, and its name did not appear in archival material.

Local residents remembered neither the paper nor its attitudes. Although this absence is not conclusive, it does suggest that the Poujadistes had little direct influence on how most local residents conceptualized Marcoule.

Nonetheless, the critiques made by *L'Echo*—along with the apocalyptic imagery of Lanza del Vasto and the Catholic critics—found echoes in the representations of local citizens. Nowhere is this clearer than in a play produced by the Gardois in 1957.

*Counter-Spectacle: “When the Tale of Marcoule Is Told”*

In 1957, the townspeople of Bagnols-sur-Cèze produced their own spectacle about the arrival of nuclear technology in their midst: a musical pageant in five scenes entitled “When the Tale of Marcoule Is Told.”<sup>102</sup> In many respects, the technological spectacle produced by CEA administrators and local officials was the central reference point for the play. But rather than simply reiterating the messages of salvation and redemption conveyed there, the townspeople’s pageant reacted to it and retold it, producing a counter-spectacle. The play emphasized different themes and characters from the original show. Some of these themes and characters strongly recall the spectacle’s critics—for example, the false lure of technological progress, and the apocalyptic danger lurking within the atom. Others seem more grounded in local encounters between peasants and engineers: the distance between those with technical expertise and those without, the overarching power of the state. The play’s scenes not only drew upon episodes that had already occurred at the time of performance; they also foreshadowed incidents to come.

The prologue features an engineer, two aides, a peasant, and two journalists, all contemplating the landscape of the Gard. The engineer launches into a disquisition on France’s pressing energy needs, the importance of plutonium, and why the Gard was chosen to host the first industrial-scale atomic site. As this reiteration of the CEA’s standard narrative unfolds, the two aides gaze disdainfully at the fields and mutter “Quel bled!” (“What a dump!”). The peasant informs the engineer that a levee of 3 meters will not suffice to control the flooding of the river, but the engineer dismisses his remark: “Go plant your cabbage, my good man!” This interaction sets up a question taken up later in the play, and also central to other stories locals told about Marcoule: who outsmarts whom—the peasant or the engineer?

The first scene takes place inside the home of villagers whose house will be expropriated for the site. The family mourns the loss of their home

and sings a few nostalgic songs. Characters express confusion about the events that befall them and repeat a rumor that an Eiffel Tower would be built on the site.<sup>103</sup> Just as they reach the depths of despair, the local nobleman arrives to cheer them up:

Stuff and nonsense. Don't get sentimental. This is progress, and we can't do anything about it, do you hear? In the time of our Kings everything was justified by the *raison d'état*. In your Republic, it's become Urban Planning . . . Social Progress . . . etc. What do I know? These are all worthy things. But from there to giving up my property for a morsel of bread, stop right there, my dear gentlemen. You do not know the Maître de Gicon. I will not cede my property for anything less than 50 million.

At the prospect of making millions off their land, everyone cheers up considerably. The scene develops the story of the peasant and the engineer by suggesting that, with a little noble help, the peasant-villagers can squeeze good money out of the CEA. In a twist that gets abandoned in the rest of the play (but whose message re-emerges elsewhere), the aristocrat suggests that urbanization and social progress have become the legitimators of the republic: clearly, the French state always has justification for imposing its will on the citizenry.

The second scene, which takes place outside Marcoule's construction site, includes a hodgepodge of characters and episodes. The story of the peasant and the engineer reaches a climax here. It turns out that the peasant was right: the site flooded because the levee was not high enough. The peasant has returned to laugh at the engineer and to present him with a cabbage. On the vicissitudes of nature, the peasant has thus proved wiler than the engineer, who was too proud and foolish to listen to his wise counsel. The rest of the scene features a procession of people knocking on Marcoule's door: people looking for work or clamoring for a tour. In a particularly silly twist, Prince Rainier and his new bride Grace Kelly show up in a Rolls-Royce. They alone are offered a tour of Marcoule (which they refuse because they wish to maintain their royal innocence of worldly, technological matters). Clearly, it did not escape local residents that, despite attempts to put Marcoule on the tourist map, only special privilege would get people into the site.

The third scene pokes fun at the enthusiasm of local officials for the site. It takes place in the office of the French president. He is so busy that he cannot receive the Queen of England or take a call from the president of the United States. But when Boulot, mayor of "Bagnols-Marcoule" arrives, the president greets him with open arms, punning "Quel bon boulot vous faites, Monsieur le Maire" ("You're doing a great job,

Mr. Mayor”). (*Boulot* is slang for “job” or “work.”) The mayor asks for 8 million francs to help with new construction; he gets 6 billion. The scene finishes in joyous celebration and singing. Several young women in traditional costume have accompanied the mayor, bearing a giant bottle of *Cuvée de Marcoule* and a huge cake in the shape of the G1 reactor. The scene suggests that residents of Bagnols maintain a certain ironic distance from their political leaders. Marcoule takes precedence over all else at the national level, but the scene satirically questions this priority: should the president (representing the state) not have more important things to do? The conflation of town and nuclear site (“Bagnols-Marcoule”) suggests that the mayor no longer has the sole interests of his town at heart. Finally, the sheer size of the wine bottle and the cake mocks the iconography of Marcoule.

The fourth scene depicts tensions between local residents and newcomers most explicitly, exposing the fallacy of the harmony promised by the technological spectacle. This scene takes place in Bagnols’s public wash house, where a group of women are doing their laundry. In the foreground we meet Robert and Marion, a charming young Bagnols couple contemplating marriage. Marion fantasizes about a new modern house, which would come complete with “refrigerator, washing machine, pretty dresses, a small car, and intelligent, well-dressed children.” Robert sighs: he will never nab her, since he can only plant cabbage. In strolls Jacques, a dapper young Parisian. He flirts shamelessly with Marion, who simpers. Robert cries “These Marcoulins have taken everything from us—our roofs, our vines, our fields and our gardens—and now they’re taking our girls!” and stomps out. But it turns out that Jacques does not plan to linger: his time at Marcoule has ended, and he has no plans to return. Her chances for a modern lifestyle ruined, Marion slumps off stage. The scene shifts to the washerwomen, who discuss the changes they have witnessed in their community. They complain that they no longer recognize anyone at the cinema or in church—their town no longer belongs to them. But, they admit, they will get a post office, a high school, and a sewage system, and they “needed the Marcoulins to get all that.” They express their own technological hopes: “With the atom, all we’ll have to do is press a button, and everything will come out washed and ironed.” At the end of the scene, Robert and Marion reappear, reconciled.

This scene makes clear what women can expect from the atom: not glory, nor jobs, nor money, but rather technology-induced domestic bliss. At the same time, it mocks this version of modernity by portraying Marion’s expectations that “intelligent, well-dressed children” come in the same package as new commodities.<sup>104</sup> It also clearly articulates ten-





**Figure 6.8**

The living room of a Marcoulin apartment. Presumably, it was a place such as this that Marion thought she might live in if she married Jacques. Courtesy of Mireille Justamond, Archives municipales, Bagnols-sur-Cèze.

sions between local residents and the “Marcoulins,” as the new arrivals are derisively called. Residents experience the Marcoulins as invasive: they have taken over sites of sociability and places of worship. Newcomers have robbed local men of their land, their homes, and their livelihood. In the ultimate insult to their masculinity, the nuclear men threaten to take “their” women away too—thereby corrupting the archetype of traditional, female France. Jacques represents not only the selfish, acquisitive Parisian/Marcoulin but also the false seduction of a flighty, commodified modernity. Marion hopes to reap the harvest of progress by marrying him, only to have those hopes slip through her fingers as he dashes off to his next technological rendezvous. Her final reconciliation with Robert suggests that in the end, Bagnolaises do better by sticking to traditional ways.

The last scene—“Finale or Apotheosis”—conveys a mystical, dreadful sense of the atom itself, strongly evocative of the apocalyptic language used by some of the critics of the technological spectacle. Abandoning local characters and caricatures, the scene begins with an offstage voice stage intoning: “In the beginning was the Word, and the Word was God. And this God created the Heavens and the Earth, the World and the

Atom.” On stage, the company—now dressed to represent Earth, Cain and Abel, Man, and the human race—sing words from *Faust*. Earth recites a somewhat plaintive poem, to which Atom—still off stage—responds:

I share in your pain, o dear and ancient Earth  
 For ignored by all during millennia  
 I tasted in the very stuff of matter a peaceful rest  
 God created me everywhere  
 I am in the petal of the rose, and in the blackest coal  
 I am in the air, the sun, and space  
 And in the live flesh of animated beings  
 . . . Then, ancient Earth, hate was born on your soil and war . . . submerged the  
 world of the living . . .  
 And your children, no longer happy with searching your veins, discovered my  
 power. This immeasurable power that I myself did not know I had.  
 And to serve this hate they managed to capture me, to domesticate me like cattle,  
 to subordinate me to their needs and to assuage their folly  
 Like Satan in his kingdom of Hell  
 Where will they stop?  
 Do they realize that one day I may take revenge?  
 By unleashing upon them this destructive force that they revealed to me.

Terrified, Earth begs for mercy, and asks what sacrifice Atom wants. No sacrifice, Atom responds. Treasures? No. Power and glory? Neither. How about intelligence and harmony, the qualities aroused by scientists and artists? In a transport of biblical passion, Atom responds:

You stray, ancient Earth; that which my heart longs for is PEACE and Love. That infinite love of man for his brother man, whether he be great or miserable. . . . Whether he lives in icy deserts or in the sunniest of places. . . . Whether his face be black or white or yellow. The day when I see all men love each other, I will leash my power to their service. And I will bury my vengeance when I see that PEACE reigns among them.

Earth appears to grasp this message. In the grand finale, the company sings the “Ode to Joy” from Beethoven’s Ninth Symphony.

This scene clearly expresses fear and ambivalence about the prospects represented by the atom. In the spectacle of technological progress, the atom is never detached from the technology needed to control it; together, the atom and the reactors appear as savior and redeemer. In this scene, however, the atom exists independently, as a pure force of nature, a creation of God. The biblical language parallels that of Lanza del Vasto

and the Catholic critics. The dominant spectacle proposed nuclear technology (including and especially the bomb) as France's redeemer and savior. The counter-spectacle suggests that the atom will redeem nothing as long as peace does not reign. Indeed, man (the only female presence in this scene is plaintive, confused Earth) may have erred mightily in trying to enslave the atom to his violent impulses. Someday the atom might escape human control and wreak vengeance upon all the earth. Peace and love are more important than treasures, power, glory, intelligence, or harmony—that is, more important than anything Marcoule could bring to the region. For those who identified with the story told in this scene, technological progress clearly did not mark the telos of human existence.

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Local political and intellectual elites in the Gard and in the Touraine treated the nuclear sites as symbolic mediators between their region and the nation. The sites brought the nation into the region. Appropriating the nuclear sites through regional metaphors and dramatic narratives made the sites—and therefore, in some ways, the nation—local. In invoking the nation, local elites (as well as technologists) endowed the sites—and, by extension, local modernization projects—with a higher moral purpose. At the same time, their appropriations resituated the regions within the nation and defined a role for them in the emerging technological France. In the scenarios imagined by the producers of the technological spectacle, regional history, national destiny, and technological development all worked together. These scenarios cultivated national and local historical consciousness as a way of defining modernity, tradition, and the relationship between them.

Frank opposition to Marcoule and to the state that built it shows that it was at least conceivable to reject the story told by this spectacle. Other meanings were possible. But the marginality of this opposition on a local level suggests that most residents did not consider outright rejection a serious option. For the residents of the Gard and the Touraine, nuclear technology was not an abstract issue. Nor were nuclear plants radically separate from other aspects of modern life. Still, the representations proposed by the critics added to the vocabulary created by the technological spectacle. Together, the show and its critics provided a set of concepts through which their audience might imagine and interpret technological France.

"When the Tale of Marcoule Is Told" indicates how some of that audi-

ence used that vocabulary. It shows that the spectacle of technological progress was powerful but not monolithic. Performing or watching the play gave locals an opportunity to grapple with representations of technological progress and with their experience of modernization. The play's lack of a single plot line appropriately reflected how residents constructed their understanding of Marcoule. Whereas the technological spectacle tried to impose a unified interpretation of Marcoule, the counter-spectacle has a more fragmented quality and offers multiple meanings. These meanings center not around abstract concepts such as progress, but around human emotions and experiences: hope, fear, betrayal, arrogance, cunning, ambition, and invasion.

The villagers gathered along the roads of Codolet to watch the “atomic millipede” and the queue for guided tours of Chinon demonstrate that, at least in some respects, residents of the Gard and the Touraine did experience nuclear development as a spectacle. Indeed, their willingness to behave as enthusiastic audiences and eager tourists contributed mightily to the creation of the spectacle. After all, a show without an audience is not a spectacle but a flop. But were Gardois, Tourangeaux, and other French citizens *merely* audiences for a grandiose pageant? How did ordinary people feel about nuclear technology in the 1950s and the 1960s? What impact did the nuclear sites have on the Gardois and the Tourangeaux?

Results of public opinion polls make it possible to draw a rough sketch of public responses to nuclear technology. A small number of polls taken in the 1950s and the 1960s asked adults what they thought about the prospect and the reality of a French atomic arsenal. One poll also tried to determine how people felt about nuclear power and what beliefs they held about the dangers of radioactivity. The responses to such poll questions provide some indication of how “the French” (often an undifferentiated category in these polls) thought about nuclear development. We must be careful, however, to keep in mind the many limitations inherent in these sources. Polls—particularly polls with multiple-choice questions—can make categories of opinion appear where none might exist otherwise. (To what extent, for example, did citizens really think of themselves as having “an opinion” about a French atomic bomb?) Furthermore, multiple-choice poll questions obscure potential diversity by forcing respondents to choose “yes” or “no,” “for” or “against.” The categories of opinion supposedly revealed by polls may in fact be simply those of the pollsters or of the groups that commissioned them.<sup>1</sup>