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PLANNERS' VIEWS ON NUCLEAR HAZARD

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1. Introduction

In the framework of a larger research project on environmental movements, carried out in 1983-1987 in the Italian region of Friuli (1), a study of attitudes of planners on a variety of environmental topics was conducted in 1987-8. The specific aim of this part of the research was to compare the attitudes of planners to those of the general public in a number of communities where environmental conflicts and mobilization had occurred. The planners were hypothesized to be the social category with the best knowledge on environmental matters and with the most rational approach to them; thus representing the closest approximation to "truth", against which the "opinions" of the general public could be contrasted. In fact, planners had been already used in earlier stages of the research, as "judges" on whose judgement the choice of the "most important" cases of environmental community conflict had been made.

2. Sample and interview technique

There is no legal or formal definition of what a "planner" is. We included in this category both public officials (65), working in the planning or "public works" departments of administrative bodies (Region, Provinces, Townships) and private professionals (49) who had consulting or design experiences with them. In addition, 6 professors of the Engineering Faculty (courses on Environmental planning) of the University of Udine were included. Of these 120 people, 73 held degrees in architecture, 37 in engineering, and 10 in other subjects. The average age is 45: one third of the sample is between 30 and 40, a second third between 40 and 50, and the rest is older (but not much).

The uncertainty on the definition of the units is reflected on the uncertainty in the definition of the universe and on the selection of the sample. It is impossible to assess the degree of "representativeness" of our sample. However, Friuli is a relatively small region (about 1 million people), and years of participation in its public life through the media, and of attention to events in the environmental field, had allowed the senior researcher to build a reasonably broad

knowledge of the most relevant people and offices. Professional bodies (guilds) also provided indications on the most prominent experts. In practice, the sample was formed through the "snowballing" technique: starting from a base of personally known experts, we asked them to name other workers in the field. In fact, we are confident that the 120 selected people more than a sample, approximate the universe of experts in environmental-territorial planning in the region. Most of them resided in the regional and provincial capitals, but a balanced coverage of all parts of the regional territory was pursued.

The sample was interviewed by expert personnel. The questionnaire included many items already used in previous studies on environmental problems; as pointed out above, the main aim of this part of the the research was to compare the planners- views with those of the general public. But some sections of the questionnaire were built around issues typical and exclusive of the planning profession.

The use of expert interviewers allowed for a combination of the questionnaire and of the "open, qualified interviews" techniques. Respondents were encouraged to expand and elaborate on the questions. Their comments were magnetically recorded and later used in "fine tuning" of the answers themselves, and in a more qualitative analysis of the data.

The interviews were carried out in two bouts: June-September 1987 (70) and January-April 1988 (50). This remark is not quite idle, as we shall see below.

3. General results

Regarding the general aims of the study, the results can be summarized as follows:

a)planners are generally more "moderate", thoughtful, and less emphatic in their views on the causes of environmental concerns, than the general public. They are also less inclined to impute them to religious feelings (sacredness of nature, life), but also to economic, material interests (environmental resources as raw material for the tourist industry). Interestingly, they are also less fascinated by the scientific and educational motives of environmental preservation (natural areas as research labs).

b)Planners are also significantly more critical than the general public of the environmentally abnoxious effects of modern, industrial agriculture.

c) More than the general public, planners impute the rise of environmental opposition movements (of the grassroots, local, "NIMBY" type), to "manipulation by political parties and movements". On other possible causes, they exhibit a more prudent outlook, although the rank order indicated is the same as the general public's.

d) Planners (or their children) are members of broadly environmental (including outdoor-sports) associations incomparably more often than the general public (32% vs. 1.5%)

e) More than the general public, planners are hard put to pinpoint the causes of environmental degradation on specific, single social categories (manufacturers, politicians,

private citizens, developers and designers). They are more inclined to indicate multiple causes and collective, "systemic" responsibilities.

f) The attitudes of planners on environmental movements (of the type specified above) are not significantly different than those of the general public (of the communities where such movements had occurred): i.e broadly positive and sympathetic.

g) among the general guidelines to prevent, avoid or solve environmental conflicts, planners indicate, in the first place, the "efficiency of the political/administrative institutions", and "better quality of the planning, programming and administrative processes". At the second place they indicate "more participation, more democracy" and "less party-politics". Only at the third place comes the request of "more power to technicians" and by far the lowest place is occupied by the item "more authority, stronger decision-making". Although on this battery no comparison with the general public is possible, it seems that planners do not incline towards a "technocratic", authoritarian ideology.

h) Two-thirds of the planners judge as inadequate, or hardly adequate, the knowledge on environmental problems acquired at the university. They also think that the situation has improved, but not much, in more recent times.

i) The influence of age, profession, position (official or free professional) and other such personal variables on the environmental attitudes of planners is generally weak and not systematic. Officials have a significantly better opinion of the environmental sensitivity of politicians, and are less prone to impute to them the causes of environmental degradation: but they are also more sympathetic to environmental opposition movements. At the same time, they give more importance to political authorities and technicians in the prevention and solution of environmental conflicts, and show a higher degree of trust in authority and strong decision making as a general principle in such matters.

4. Views on nuclear hazard

Among the sections of the questionnaire presented only to the planners sample (and not to the general public) one concerned perceptions and attitudes toward the issue of nuclear power generation. The reason was, of course, that in the middle of the research project the Chernobyl accident occurred, which tremendously affected Italian public opinion, hugely boosted environmental movements, associations and organizations, and turned upside-down Italian public policies on energy. Between 1986 and 1987 opposers of nuclear power swayed Italy, and a national referendum was called for November 1987 to decide whether to continue Italy's programmes in this field or opt out of the nuclear world. Discussions were intense, and it seemed interesting to us to take a look at the planners' attitudes on the issue, as a small pre-referendum test. However, it was possible to conduct only 70 of the 120 interviews before the referendum. In the following pages we will present the data pertaining only to this sub-sample.

a) Competence on the issue

Almost half of the respondents (47.2 %) refuse to respond or candidly declare their lack of competence on the problem of nuclear energy. Another 42.9 % seem to possess just a "normal", common-sense competence. Only a tenth deals with the issue as if having a special, technical expertise on it. No comparative data are at hand, but the impression is that this is a rather low figure, given that this is supposed to be the most qualified group of experts in the region (except perhaps for a handful of physics professors at the university).

b) Position towards the nuclear in principle

Pressed for an answer anyway, 57 % of the sample is in favour of nuclear plants in general and in theory. Another 15 % would accept keeping the plants already in operation or in advanced construction, but is against starting new ones; a similar percentage (14.3 %) would scrap all existing plants, and 8.6 % is in various way against any nuclear program. A marginal quota (4.5 % refuses to answer.

Comments on these questions are diverse. Supporters argue that

"it would be absurd to phase out nuclear technology, because the fission technology is a necessary stepping stone to get to future fusion technology (Univ. prof, 33)

"Hydroelectric power generation has caused more casualties than nuclear (e.g. the Vajont dam disaster, 3000 dead) (Public health service official, 64),

"It would be ridiculous to give up nuclear energy in a country such as Italy, when all around her borders nuclear plants remain in operation. This is a decision that should be taken at the all-European level" (Arch., 37)

"Nuclear plants should be kept in operation, at least as experiments toward safer technology. Our society cannot afford to renounce nuclear technology" (Eng., 39).

"Studies and experimentations on nuclear power generation should go on. Progress cannot be stopped. To renounce nuclear energy would be to give up a way of life" (Eng., 66).

"We must keep nuclear plants, because 1) we cannot stand against progress, 2) nuclear is the future of mankind, 3) we are only at the early steps of nuclear technology, which will undoubtedly become much safer than it is today. Mankind must bear the risks, this is absolutely inevitable, 4) all other energy sources are running out, there is no alternative to nuclear. We must get to fusion" (Eng., publ. off., 51).

"Nuclear energy is inevitable; at least until fusion. We must feed the people. And then, energy is delight. Compare from a look-out, in the night, the landscape of an energy-poor and an energy-rich country, such as Yugoslavia and Italy" (Arch, 43).

"Go on with research on fusion. Italy has brains to contribute" (Eng., 35).

Also the arguments of opposers are rather familiar:

"All nuclear plants should be destroyed. There has been an awful increase in cancer in UK, around nuclear plants" (Arch., 36).

"The nuclear energy model proposes a militaristic, police-, authoritarian system which I refuse. It is almost a political position. I am in favor of small plants. even coal-fueled. Carbon dioxide comes and goes, thanks to volcanoes, more than because of all coal generation plants" (Env. planner, 44)

"I am against nuclear plants in Italy, because 1) political grounds: nuclear technology requires the strictest controls, and thus, in the end, less freedom for everybody; 2) because it requires secrecy and mystery, for fear of panic reactions, and thus it is undemocratic; 3) we must work toward less energy dissipation; 4) radioactive waste products are an insoluble problem" (Arch., and politician, 35).

"I am against, because of insufficient controls. Also, because nuclear technology would mean running the risk of the militarization of society. It is like a motorway, once you enter it you cannot stop, except in a crash " (Eng., 44).

Others have more nuanced opinions, somewhat depending on their political preferences:

"No taboos on nuclear generation; but today technicians cannot guarantee the security of nuclear plants. In the future, full security could be achieved. Thus, OK to experimentation. But, it is the present Italian policy on nuclear which is perverse. It is based on the collective folly, madness, ambitions of the ruling class, supported by technocrats. Italy is a colony of the USA, and the nuclear is only the expression of American colonialist interests. Let's wait until science has reached absolute security. Nuclear is too dangerous, it causes irreversible processes, alterations. It unleashes forces mankind has never before manipulated. True science needs centuries of experimentations, testings. Nuclear power is in-human. Public opinion is not informed. The Chernobyl incident has been inflated on media for political reasons, as the product of an inferior, backward technology, in turn the product of an inferior socio- political system, compared to the West. Then we have seen that it was in fact first-rate technology: the incident was due to human error. It is only an accident that at Chernobyl the effect has been more marked. We should enquire whether Three Miles Island has not had similar effects "(Arch., 70).

c. Position on the nuclear in Italy.

As already remarked, the distinction between nuclear power in theory and in general and the Italian policy in this field is rather common in the answers of our planners. The relative majority (47 %) are against i continuation of Italian nuclear programmes: 45.7 % in favour, and 7.1 % uncertain. It is rto be noted that these percentages closely mathched the outcomes of the national referendum which took place a couple of months after our survey. The reason of this decrease in the support of the nuclear is mistrust in the ability of the Italian society to design and run properly such plants:

"I am not against nuclear plants in general: only against the Italian ones, because ill-conceived, built and run. They should be torn down. I would be in favour of nuclear generation, if it were run in a more correct way" (Arch., 52).

"No to nuclear plants, because Italian institutions - political, industrial, trade-unions - do not warrant enough reliability in the building, running and controlling a nuclear plant" (Eng., publ. off., 45).

"The Italian decision-making system is not reliable enough to allow trust in such choices, even if theoretically the risk is acceptable" (Eng., 44).

d) Hypothetical reactions to a near nuclear site

It was asked to our respondents to report their reactions in case a nuclear plant were located within 30 km of their homes. 18.7% would stay, with little or no fear; another 37.1 % would stay, but with some unease; 18.6 % would stay, but would only the time necessary to find another location; only 21.4 % would leave the place immediately. But even those who would stay would do so for a variety of reasons. Among the most interesting ones:

"I would stay there though persuaded it is hazardous. I am against personal solutions to these problems. We cannot save ourselves alone in this world" (Eng., publ. off., 44).

"I live in a city, in the middle of so many hazards that a nuclear plant, if built with all security rules, is less dangerous than going out of home (a car passing a red light; be forced to stay in a room with smokers). Security does not exist: we must constantly calculate costs and benefits. Nuclear energy, as an hazard, cannot by far be compared with many others. In past times, life was even more dangerous, a lot more (Publ. health off., 63)

"Every single inhabitant on this planet has over his head I do not know how many tons of TNT. And then all those traffic accidents, etc. Risk is immanent in modern life, there is nothing to do. See the Valtellina landslides" (Eng., publ. off., 39).

Others would take a less philosophical, more active stance: "I would struggle against it" (Arch., 33); "I would promote a mass mobilization" (Arch., 70)

One respondent insists with an aesthetic approach to nuclear plants: "As a boy I would go on vacation in the vicinity of the Latina nuclear power plant, and would relish the sight of the silvery dome. No fearful feelings at all" (Arch., 43).

Another would generalize the rule that people responsible for nuclear plants should live close to them:

"Politicians who want nuclear plants and engineers who build them should be required to reside near them: just as industry owners should be required to live near their plants"(Arch., 43)

e) Opinions on the effects of the Chernobyl accident on public attitudes toward the nuclear

A question was submitted on what, in the respondents' views, the reactions of the public opinion had been, regarding the nuclear issue and the environmental problems in general. However, because of a technical problem, data from this item have not yet been analysed.

f) Opinions on the quality of information spread by media at the time of the Chernobyl accident

A semantic-differential type of battery was administered to respondents to assess their judgement on the quality of information spread by mass media in the days immediately after the Chernobyl accident. Overwhelmingly, it was judged contradictory, unreliable, not understandable, minimizing, untrue, and aimed to avoid panic. Some respondents imputed these characters not to ill-will or intentional plots, but to plain ignorance. Others thought it in line with all the rest of news reporting: "the information on Chernobyl was a normal sample of the way information is made in Italy - neither more nor less false than other news" (Arch., Publ. off., 37). Another had a personal experience of the way information was manipulated: "I was with an emergency team at the time. They were aghast with the readings on their radioactivity measure instruments. But publicly they would deny any problem".

5. Conclusion

This small piece of research suffers of some obvious limitations. The first is lack of theoretical contextuation. The battery on attitudes to nuclear power was inserted somewhat hastily in a survey focused on other aspects of the environmental problematique. The data generated by the battery were used for a short report published on local media, in the context of the heated discussions on the incoming referendum. They were not subsequently subject to more thorough, theoretically-driven scientific analysis; nor this has been possible in reference to the present meeting. They are offered here as raw material to specialists in the field. A re-analysis, with more sophisticated statistical techniques, could be done in case of publication of the proceedings of the present meeting. The second main limitation is, of course, their age. Eight years, in these topics, may mean a lot. On the other hand, the nuclear power issue is far from over, in Italy as elsewhere, so the data may maintain some relevance.

Two substantive results stand out, in our judgement, as the most interesting. The first is that in our complex society, no social group, however well-educated and occupying high-level professional positions, can claim to special knowledge in fields just outside his own narrow competence. Social differentiation, specialization, division of labour makes it ever more difficult for any group to develop a coherent, precise image of general social problems. Public opinion is not the result of communication (unlimited or otherwise) among the plurality of social groups, but the construction of another special group, those of media, mediators and political institutions. As a result, the opinion of experts and technicians, such as the planners, on nuclear problems is basically not different from that of the "man in the street". A further consequence is that the closest attention, also from social scientists, should be paid to the practices, motivations, values etc. of the media people, as a key group in democratic societies.

The second interesting result is the high degree of mistrust in the ability of the societal and political institutions to run a nuclear energy system. Nuclear power plants may be quite reliable in theory; it is their institutional matrix which is not deemed reliable. This cynical, self-damning attitude may perhaps be peculiar of Italian culture, and may be rooted in centuries of foreign, often inept domination. But there are many indications that cynicism and pessimism is spreading to all advanced societies. People everywhere seem to grow less and less confident in the ability of their societal systems to overcome the problems entailed by growth.

Note

1)The overall project has been wrapped up in R. Strassoldo, Le radici dell'erba. Sociologia dei movimenti ambientali di base (Grassroots. The sociology of local environmental movements), Liguori, Napoli, 1993, pp. 393. Some parts of it has been published in English: R. Strassoldo, "Thinking globally and acting locally: a study of environmental opposition to growth projects in Friuli (Italy)", in B. Hamm (ed.) Progress in Social Ecology, Mittal, New Delhi, 1992, pp. 48-77.

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