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** THE CREATION OF NUPLEXES, i.e., complexes of nuclear power plants together representing a considerable installed capacity, could perhaps improve the Community's supply structures. The Commission of the European Communities has therefore awarded a contract to the Technische Hochschule of Aachen for the study of the practical prospects of setting up such nuplexes within the Community. Details are given in ANNEX 1.

** CONCENTRATION IN THE AUTOMOBILE INDUSTRY increased by 3.8% in 1968-69, five manufacturers accounting for a total of 70.2% of the 5,080,253 new registrations in the Community. Nonetheless, as a result of various factors including economic interpenetration, the automobile market in the various Community states appears to have become more competitive. These are some of the facts which emerge from a study on the figures for the degree of concentration and their application to the Community automobile industry which has just appeared in the series "Competition - Approximation of Laws" (1971, No. 17) put out by the Office of Official Publications of the European Communities (PO Box 1003 - Luxembourg 1). Further details can be found in ANNEX 2.

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The information and articles published in this Bulletin concern European scientific cooperation and industrial development in Europe. Hence they are not simply confined to reports on the decisions or views of the Commission of the European Communities, but cover the whole field of questions discussed in the different circles concerned.

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** At its meeting in Brussels on 24 and 25 April 1972 the Council finally drew up a TRANSITIONAL RESEARCH PROGRAMME FOR 1972 for a total sum of 40.64 million units of account. Some of the projects will be implemented under a common programme totalling 15.03 million u.a., and the remainder under supplementary programmes totalling 25.56 million u.a., in which four or five Member States will participate. A table of the objectives of this programme will be found in ANNEX 3.

The Council also approved a five-year programme on DATA PROCESSING, to be allocated one million u.a. over five years. Lastly, the Council approved non-nuclear projects to a sum of four million u.a., and requiring a staff of 213.

Three programmes for indirect projects have already been agreed, namely:

1. Thermonuclear fusion (five years starting 1 January 1971
staff of 91, 46.5 million u.a.)
2. Biology and health protection (five years starting 1 January 1971
staff of 107, 22,945,000 u.a.)
3. Participation in Dragon reactor (three years starting 1 April 1970
staff of 20, 6.9 million u.a.)

** COMMERCIAL TIES BETWEEN THE EUROPEAN COMMUNITY, THE UNITED STATES AND JAPAN represent more than 60% of world trade. The volume of trade between the Community countries and Japan has never been large up to the present, largely because of the distance factor and on account of a certain similarity of trade structures (Japan and the Community produce the same type of goods). However, trade between the Community and Japan has increased more than tenfold since the creation of the Common Market. At that time the Community exported goods worth \$139 million to Japan, with imports running at \$117 million. In 1971 the corresponding figures were \$937 and 1,542 million.

** At its meeting in Strasbourg on 18 April 1972 the European Parliament welcomed the proposal put forward by the Commission of the European Communities concerning the EXTENSION OF THE BENEFITS OF THE PRIVILEGED STATUS OF JOINT UNDERTAKING, as envisaged by the Euratom Treaty, to public service activities and also to firms doing important work of European interest in the field of technological development or the supply of raw materials, on the grounds that it would facilitate transfrontier cooperation in these fields. At the same time the European Parliament is concerned lest the fragmentation, diversity and complexity of the proposals relating to transfrontier economic cooperation make it difficult to keep an overall watch on the possibilities of organization in the field of economic law and particularly of company law. It voiced this opinion in a resolution which it adopted after hearing a report on this subject presented by Mr Lautenschlager on behalf of the Legal Commission.

Parliament also approved a report on the Commission's proposal to the Council concerning a regulation on the APPLICATION OF THE STATUS OF JOINT UNDERTAKING TO ACTIVITIES IN THE HYDROCARBONS SECTOR, which was presented by Mr Hougardy on behalf of the Parliamentary Commission on Energy, Research and Atomic Problems. A resolution adopted by the European Parliament includes the following statement:

"The Commission's proposal to create "Joint Undertakings" in activities relating to hydrocarbons constitutes only one of the items in a wider policy designed to increase the dependability of oil supplies." Parliament considers that this proposal could help, at least temporarily, to improve the financial strength of firms in the Community's hydrocarbons industry, which are unable on their own to bear the enormous outlay entailed by the growth of investments and the increasing cost of research and operational activities. It thinks, however, that this is only a transitional measure justified by the urgency of the problem, and that in the long run the aims envisaged by the Commission's proposal cannot be attained without harmonizing national tax laws.

** Replying to a written question from Mr Vredeling, Dutch member of the European Parliament, concerning the THREATS TO PUBLIC HEALTH POSED BY THE USE OF ATOMIC ENERGY, the Commission of the European Communities observes that certain recent public statements to the effect that the dangers to public health represented by the use of nuclear energy have been gravely underestimated are considered in scientific circles to be based on erroneous assumptions both as regards the use of statistics and as regards methodology.

However, the European Commission continues to maintain extreme vigilance concerning the health protection problems raised by the multiplication of nuclear installations and the steady increase in the use of radioactive sources. The review of the Basic Standards at present under consideration takes this preoccupation into account and is based both on the experience gained by the implementation at national level of Community directives and on the state of scientific knowledge with regard to the biological effects of ionizing radiations. In addition, the Community is cooperating with the Member States in a research programme on "Biology and Health Protection". Among its objectives are the updating of European radiation protection standards and the quantitative evaluation of the effects of small doses of radiation.

It cannot be maintained that the risks inherent in the use of nuclear energy have hitherto been underestimated. This is why the Commission has already stated - in view of the high degree of security which surrounds nuclear activities - that there was no question of making radical changes in the Euratom Basic Standards, promulgated in the form of directives by the Council. These standards are obligatory for the Six and constitutes a common basis for aligning national laws (see IRT No. 134).

** In reply to a written question from Mr Cousté, a member of the European Parliament, the Commission of the European Communities recently stated that THE FLOW OF DIRECT INVESTMENT BETWEEN WEST GERMANY AND FRANCE in recent years (according to data taken from the balance sheet published by the French government) is as follows:

	<u>West Germany</u> >	<u>France</u>	<u>France</u> >	<u>West Germany</u>
	Gross in \$ million	Net ¹	Gross	Net ¹
1965	35.0	30.6	19.6	16.8
1966	27.5	25.3	19.6	19.0
1967	44.6	42.2	24.5	23.5
1968	85.3	79.8	22.9	22.7
1969	65.8	60.4	16.6	-35.0
1970	89.8	86.8	28.8	17.3

¹New investments less disinvestments.

** CYBERNETICS IN MANAGEMENT is to be the subject of the international symposium organized at the Ecole des hautes études économiques et sociales de St. Gallen, Switzerland, on 15-17 May 1972 by the International Students Committee on International Management (ISC). This committee was created in 1970 with the aim of achieving a genuine dialogue between heads of businesses, university lecturers and students on basic problems of their work.

** A report on the DEVELOPMENT OF THE SOCIAL SITUATION WITHIN THE COMMUNITY IN 1971 has just been published by the Commission of the European Communities, together with the Fifth General Report on the Activity of the Communities. It is on sale at the Office of Official Publications of the European Communities (PO Box 1003 - Luxembourg 1).

THE CREATION OF NUCLEAR COMPLEXES WITHIN THE COMMUNITY WOULD MAKE IT
POSSIBLE TO IMPROVE ELECTRICITY SUPPLY STRUCTURES

The creation of nuplexes, i.e., complexes of nuclear power plants together representing a considerable installed capacity, could perhaps improve the Community's electricity supply structures. It is well known that the steady rise in the demand for electricity is posing increasingly difficult siting problems. The construction of such nuplexes would also lend itself to economies of scale, resulting from the increased size of plants, and of use, resulting from the joint utilization by several plants of certain associated installations.

The question of the construction of nuplexes in Europe has been under study since 1968 by the Tempo Study Bureau of General Electric. A map of Europe indicating the location of the planned sites has been prepared, and a costs estimate has been made which suggests that the creation of nuplexes consisting of 1500 MW turbogenerators grouped in nuclear units of about 5000 MW and having a total power of 20,000 MW might give a saving of 15% in electricity production costs.

Certain aspects of the problem, however, deserve closer analysis:

1. The present European production and distribution structure makes it difficult to arrange for the relatively short term transfer of a major part of the capacity to about six such complexes.
2. Due consideration should be given to the difficulties of providing cold water supplies, and in particular the costs of such supplies, which are liable to be very high, even if the nuplexes are sited by the sea.
3. The transmission of these enormous quantities of electricity would be very difficult by existing methods, and the construction of such complexes therefore appears to depend on the development of new methods of power transmission.

4. It may be difficult to solve certain technical problems inherent in the construction of 5000 MW power stations in time for this project to be implemented by 1985.

Because of all these problems the Commission has awarded a study contract to the Technische Hochschule of Aachen, to be implemented in the following two stages:

1. In this stage, begun in 1969 and now finished, designs for a nuclear complex were studied and the financial advantages of grouping power plants were calculated. The transmission cost aspect was also considered, i.e., the question of what savings the nuclear complex would imply for a given region as compared with the present dispersed arrangement taking into account the reform of transmission structures which would be required.

The conclusion was that the potential capital saving was about 25% and that this would result in a reduction of about 18% in the price per kWh, not allowing for transmission problems. A provisional study of a model comparing the nuplex project with a project for dispersed plants suggested that theoretically, or at all events according to this model, such a complex could serve an area with a maximum area of about 700 km. When this limit is reached, the total cost becomes equal to that of dispersed plants.

2. This stage, for which the contract was signed recently, consists in examining to what degree this theoretical model can be verified in practice. In other terms, it consists in defining the possibilities of its practical application in Europe, due account being taken of practical problems such as cooling water supplies which arise in various fields and in various parts of the Community.

CONCENTRATION IN THE COMMUNITY'S MOTOR INDUSTRY

(according to a study on concentration figures and their practical application in the Community's automobile industry published by the Commission of the European Communities in the series "Competition - Approximation of Laws", 1971, No. 17)

The total number of private vehicles registered in the Community as a whole was about 4,242,000 in 1967, 4,430,000 in 1968 and 5,080,000 in 1969. Thus there was an increase of almost 20% over this period.

The firm with the largest share in this total was Fiat with 24.97% (1,059,148 vehicles registered) in 1967, 24.87% (1,101,690 private cars) in 1968 and 22.88% (1,162,155 private cars) in 1969. This may appear surprising, since Volkswagen/Audi/NSU (the last-named included since 1969) is by far the largest producer of private vehicles on the European continent. The explanation lies in the volume and direction of exports of private vehicles from Germany.

While Volkswagen has its traditional market in the EFTA countries and the US, that of Fiat's is in the Six. However, the share of Volkswagen/Audi/NSU (since 1969) in the total increased from 11.6% in 1967 to 12.2% in 1968 and 15.5% in 1969. Renault, which held second position in 1967 with 11.8%, slipped back to third place in 1968 and 1969 with 11.1 and 11.5% respectively. Citroen's share shows a downward trend with 8.7% in 1967, 7.2% in 1968 and 6.4% in 1969.

The two European subsidiaries (Opel and Ford in West Germany) of the US-owned General Motors and Ford are close runners-up in the Community market with 9.4 and 8.0% in 1967, 9.3 and 7.3% in 1968 and 10.7 and 9.7% in 1969. The share of BMC/BMC/Innocenti remains relatively small with 2.8% in 1968 and 2.4% in 1969, despite large-scale concentration in the UK car industry.

Among the makes which account for less than 1% of the total number of vehicles registered are some which have made considerable progress during the period studied, e.g., Toyota, which doubled its share between 1967 and 1969.

The five firms having the largest number of new registrations in 1967, namely, Fiat, Renault, Volkswagen/Auto-Union, General Motors and Citroen, account for 66.5% of the 4,242,347 new vehicles registered, while the corresponding firms in 1969, namely, Fiat/Bianchi/Lancia, Volkswagen/Auto-Union/NSU, Renault, General Motors and Ford, account for 70.2% of the 5,080,253 new registrations.

Between 1967 and 1968, concentration in the private vehicle industry, as measured by the number of registrations, diminished in all the Member States, amounting for the Community as a whole to a slight drop of 0.4%. Between 1968 and 1969, on the contrary, concentration increased by 3.8% in the Community.

If the period 1967-69 is considered, it is found that concentration increased in West Germany, the Benelux countries, and the Community as a whole, but diminished in France and Italy. This finding as regards West Germany is not contradicted by the fact that the relative shares of foreign firms increased in that country between 1967 and 1969.

The drop in France is explained by the increasing number of non-French makes on the national market; these increased their share from 15.1% in 1967 to 24.2% in 1969. The same phenomenon occurred in Italy, as can be seen from the fact that the national share, i.e., that of Fiat, fell from 73.3% in 1967 to 69.5% in 1969, despite the absorption by Fiat of Autobianchi and Lancia.

Finally, the automobile market in the various member countries appears to have become more competitive, particularly owing to the effects of economic interpenetration, with notable peaks in the Benelux countries, where the very low level of concentration suggests keen competition. In France and West Germany there is an average level of concentration, while in Italy Fiat continues to dominate, although its hold appears to be weakening.

Annex 3THE COMMUNITY RESEARCH PROGRAMME FOR 1972

OBJECTIVES	million u.a.			
	COMMON		SUPPLEMENTARY	
	Alloc- ations	Staff	Alloc- ations	Staff
<u>1. Support to the nuclear industry</u>				
ESSOR and ECO reactors			5,500	289
Fast reactors	0.561	30	0.900	43
High temperature reactors			(1.626	(88
Reactor safety	2.910	150	(0.350	(16
Plutonium and transplutonic elements	5.00	220		
<u>2. Public service activities</u>				
Central Nuclear Measurements Bureau	3.968	173		
Control of fissile materials			0.918	47
Information centres	0.642	30		
CENTIS			3.726	133
<u>3. Long-term research</u>				
Nuclear materials			3.154	176
Condensed state physics			3.448	178
Sora			1.150	60
<u>4. Test reactors</u>				
HFR			4.200	75
BR-2			0.588	38
<u>5. Training and instruction</u>	0.999	6		
<u>6. Direction and coordination</u>	1.000	70		

OVERALL TOTAL: 40.64 million u.a.
staff of 1,828

