The Institute for Strategic Studies.European Study Commission.Londra 14-15 I 66.

1) - Sommario.Discussion on the international situation.
2) - Discussion on an anti-ballistic missile system.

INSTITUTE FOR STRATEGIC STUDIES

EUROPEAN STUDY COMMISSION

Minutes of the Ninth Meeting, held at the Institute for Strategic Studies, 18 Adam Street, London W.C.2. on 14th and 15th January, 1966

Present: Mr. Alastair Buchan (In the Chair)

Signor A. Albonetti
Mr. Leonard Beaton
Général d'Armée Beaufre
Herr Wilhelm Cornides
Mr. Francois Duchene
Dr. Curt Gasteyger
Mr. Niels Haagerup
Dr. L.G.M. Jaquet
M. Jean Laloy
Dr. Nils Ørvik
Herr Uwe Nerlich
Dr. Klaus Ritter
Dr. Theo Sommer
Signor Altiero Spinelli
Professor Jacques Vernant

Dr. Karl Birnbaum attended as an observer

The following attended by special invitation:

Mr. Hedley Bull	(Foreign Office, London)
Signor Ennio Ceccarini	(Institute for Research on International Policy, Rome)
Mr. Richard B. Foster	(Stanford Research Institute)
M. Jean Gallavardin	(Institut Francais d'Etudes Strategiques)
Mr. Lennart Grape	(Director, Planning Bureau, Research Institute for National Defence, Swedish Ministry of Defence)
Major Dr. Konrad Hannes-schlaeger	(Research Associate, ISS, Ministry of Defence, Bonn)
Dr. Charles M. Herzfeld	(Director, Advanced Projects Research Agency, Washington)
Mr. Johan Holst	(Deputy Director Norwegian Defence Research Establishment)
Mr. W.N. Hugh-Jones	(Foreign Office, London)
Dr. H. Müller-Roschach	(Head of Planning Council, Foreign Ministry, Bonn)
Colonel Harald Wust	(Ministry of Defence, Bonn)

1. FINANCE

Mr. Buchan drew attention to a Statement of Account as at January 1st, 1966 which had been circulated. There is a balance in hand of £237, plus the sum of £172 outstanding from the Centre d'Etudes. As meetings cost about £200 each in terms of accommodation and subsistence, the total funds available would cover the present meeting and one other, provided it were held in Paris.

Mr. Buchan said that ISS would bear the full cost of the European-American Conference to be held at Ditchley Park in April, 1966 as it had in 1965.

2. MEETINGS WITH REPRESENTATIVES FROM EASTERN EUROPE DURING 1967

Mr. Buchan reported that ISS has been awarded a grant from the Volkswagen Foundation to finance a four-year programme of studies on East-West relations in Europe. It was felt that as part of this programme some form of regular discussion should be attempted with people in Eastern Europe, particularly Poland and Czechoslovakia. No firm plans had been prepared, and it would in any case not be possible to embark upon any such discussions before 1967. Mr. Buchan suggested that the Study Commission would provide an excellent forum for exploratory discussions with Eastern Europeans; however he was anxious to have members reactions before proceeding further with this idea.

It was generally AGREED that this suggestion would be well worth pursuing. The desirability of broadening the membership was raised; there was a strong desire however to preserve the identity of the Commission with substantially its present membership and pattern of meetings, particularly since it would be impossible to forecast how successful these East-West discussions would be. The general view was that East-West discussions could best be organised in the form of meetings of the Commission to which guests would be specially invited (as in the case of the Ninth Meeting); it was suggested that four meetings might be arranged for 1967, two for members of the Commission only and two to be attended by special guests. It was further agreed that representatives from the USSR should not be invited to attend at least the first two or three special meetings.

3. NEXT MEETING

It was agreed that the Tenth Meeting of the Commission should be held in Paris in October 1966, the precise date to be fixed at the Ditchley Conference.

DISCUSSION ON THE INTERNATIONAL SITUATION

Afternoon of 14th January

A. VIETNAM

/Dr. Herzfeld and Mr. Foster were present for this discussion/

Herr Cornides in the Chair

Prof. Vernant opened the discussion by outlining French opinion on the situation in Vietnam. (1) There was a new element in the situation in that it was generally believed that for the first time (although this may be unfair to the Americans) the US Government seriously wanted negotiations. (2) The two factors supporting this interpretation were the peace offensive and, much more important, the unqualified suspension of bombing of the North. (3) So long as the bombing were not resumed, there was a chance of some positive response from North Vietnam. (4) This may not necessarily lead to negotiations, and any negotiations may not be successful, but the possibility of some progress did exist now. (5) So long as the US Government had no direct contact with the other parties to the dispute - Peking, Hanoi and the Liberation Front in the South - it would be very difficult for both sides to be clear about the other's pre-conditions for negotiations, and this was a great disadvantage.

He believed negotiations, however difficult, would be good in themselves, particularly since the US has more or less admitted that even if the war cannot be lost a military victory is hardly possible either, at least not without additional heavy commitments that would involve grave risks and uncertainties. At the moment the declared views of both sides seemed too far apart for any assessment of a possible solution. But this was not an abnormal state of affairs, and he was moderately optimistic about the prospects for negotiations. Negotiations apart, however, the outlook was far from encouraging.

Dr. Herzfeld said his agency had a 30 million dollar investment in counter-insurgency and he had been in Vietnam in November 1965, although he was involved in the military rather than the diplomatic aspects of the problem. He echoed Professor Vernant's cautious optimism about prospects for negotiations. He made two points about the cessation of bombing. First, just before the bombing stopped the US totally destroyed a plant that produced 15-20% of the total electric power in North Vietnam; this was the first time a valuable target of mixed civilian and military use had been attacked, and it was done to make the other side realise that the US could do a lot more than she has. Secondly, the pause would definitely be long enough this time to allow the other side to think. He added that the US does have one direct line of communication with Communist China: the Ambassadorial talks in Warsaw.

With regard to the military aspect, undoubtedly without the introduction of American troops the war would be lost. The introduction of North Vietnamese troops had made a great difference to the South Vietnamese, both militarily and psychologically. It was no longer possible to regard the problem as internal: the machine guns and the ammunition are made in China and two or three very well armed divisions of North Vietnamese front-line battle troops are deployed in the South. The American troops have redressed this balance and maybe more. There has been a change in the military situation beyond what Prof. Vernant's comments implied. But military means alone would not solve the problem; the problem is primarily social and political.

Mr. Foster agreed with Professor Vernant's inclusion of Peking among the interested parties. To what extent did he perceive Chinese influence being at stake in this situation, and did China have any different interest from Hanoi or the Liberation Front?

Professor Vernant said informed opinion in France believed that given the geography of the area, it would be practically impossible to reach an agreement on Vietnam without China (Dr. Herzfeld agreed). Second, a possible Chinese interest in an agreement would be as a means of obtaining the withdrawal of American forces from South Vietnam. Third, not only were the interests of Peking and Hanoi not considered identical, differences were also seen between Hanoi and the Liberation Front. The US would therefore gain from exploring the views of all three elements; her argument that the Front has no right to representation except in the Hanoi delegation was not rational, because if the

objective were to build an independent South Vietnam it made no sense to drive the Front closer to Hanoi.

General Beaufre saw the war in Vietnam as having reached the negotiating phase, which the French experienced in Algeria. This is a very long phase, in which both sides fight very hard. It begins when the stronger party ceases to believe in a purely military victory. At that time it is the stronger who talks of an agreement; the weaker cannot afford to because he would lose everything. In Algeria the French had practically won the military phase as far as they could, but they lost 90% of that during the negotiating phase just because the other side was completely adamant. At that time the National Liberation Front in Algeria had the support or the protection of several major powers (including, in their different ways, Russia and America), so they could afford to be uncompromising. This was a lesson for Vietnam: in this phase the solution would depend on the political environment that the US is able to create on the world scene. If the environment is good, agreement can be bought cheaply, if not, the price will be very high. He fully agreed with M. Vernant: the Chinese are the key to an agreement, but the US should understand that there are three enemies and deal with them accordingly. This would be a very dangerous and intricate phase, because the Chinese know the game very well and everything is handled on the psychological level. A major disadvantage for the Americans is that successive South Vietnamese governmets have not established any degree of political stability. General Beaufre stressed that from the bargaining aspect, building up a reliable political base in the South was as important as the actual negotiations with the other side.

Mr. Foster said American policy-makers were beginning to learn about patience in dealing with China and the price paid for negotiations. And they were beginning to understand that the Chinese know how to play on the American political process. The real question was whether the US would be able and willing to put up with the lies involved in this kind of negotiation without yielding to pressure to resume bombing and "win the war" in the sense of the American electorate and Congress and many military men. This is an open question; the Chinese know it and are playing on the attrition of will over a period of time for what looks like a minor point. Therefore the Chinese can afford to be adamant. The Administration does consider China a very real long-term problem; but he could not yet see (as a private individual) a clearly defined set of aims and strategies, despite the President's outline of the world as it might be in South East Asia in his John Hopkins speech.

Signor Spinelli raised the question of the role of the USSR in Vietnam.

Dr. Herzfeld considered that the interest and influence of the USSR in Hanoi was at least as large as that of Peking. This meant there were four players, not three. Whether the USSR would be easier to negotiate with than Hanoi he could not judge, He agreed substantially with General Beaufre. In regard to the South Vietnamese Government, however, government as we think of it does not really exist. What does exist is first an army command, and he had nothing but praise for the Vietnamese fighting units. Secondly there exists the beginning of a local political machinery at the provincial and village level. This is being established despite acts of terrorism; General Lansdale is coordinating a major US programme to try and build local government to some extent. This is a shift from the previous emphasis on the government in Saigon, and he believed a much more healthy one.

General Beaufre appreciated this argument, but maintained that it had been a serious error to neglect the security of Saigon and its surroundings, where the Vietcong have penetrated heavily. Recalling his previous argument, he pointed out that if Saigon is not under control, there could be incidents serious enough to wreck the American negotiating position.

Dr. Ritter did not agree with Dr. Herzfeld about the Soviet role. Shelepin's visit to Hanoi only made sense if the USSR was conscious of the need to strengthen her influence. The Russians are being forced to involve themselves more deeply because of the trouble in the communist camp: the recent Havanna Conference indicated that the Russians are really worried about the problem of leadership.. He agreed with the French view that there are three enemies; but the Chinese hand

would not be so strong if she could not figure as the threat to the coexistence between the USSR and the US. The main problem for the USSR is how to establish her influence over Hanoi so as to make sure that the Soviet rather than the Chinese approach prevails; in this process the stakes are likely to be raised and certain risks must be expected. Therefore although there may be a real chance for negotiations, he was not sure whether the time is ripe and whether we must not expect one more phase of escalation.

Dr. Herzfeld agreed that there is competition in Hanoi, and it is escalating.

Dr. Jaquet commenting on Mr. Foster's indication that the US still has no long-term plan for China, recalled raising the question in the ESC a year ago of some element of grand design in US policy towards Asia. If escalation continued, European concern about the increasing shift away from Europe to Asia would deepen. He suggested the US would have to decide whether she wanted to contain China or come to terms with her, i.e. by recognising her influence as a major power in the area. Was the US prepared to deal with China on this basis, or was she determined to exert a permanent influence on the mainland Asia?

Dr. Herzfeld agreed that the question of a grand design in US actions was a major issue; the only way he could answer it would be unsatisfactory to most Europeans. He referred to the President's State of the Union message. The basic purposes of the US are not to contain China, or any other nation. They are to prevent a trend of affairs which would wind up being intolerable. When do you confront the Chinese with the fact that they will not rule the world as long as the US exists? And where: in South East Asia, Africa or Latin America? He favoured doing this where the cost would be least, where the US is doing it now. It was not trivial to say that the people of South Vietnam should be allowed to determine their own fate, that the Vietcong should not be allowed to get away with controlling large areas by acts of terrorism. None of this contradicted the points made about negotiations; but he wanted to introduce some of the other factors that must go into the whole picture.

Morning of 15th January

B. EUROPE

Dr. Birnbaum in the Chair

(1) The French Elections

M. Laloy suggested that the only question worth discussing was the extent to which international issues had a bearing on the presedential elections. A fairly strong current of opinion in France considers that the European question in particular did influence the result. Two important elements in the election were the internal situation (economic and agricultural) and the measure of disenchantment which must be expected after seven years in power. The campaign of the two opposition candidates, representing the Left and the Centre Right, gave rise to a considerable debate on the European question; but the Atlantic alliance was not a significant issue. On the European question, Mitterand clearly took a much stronger pro-Europe position than he had previously adopted. Lecanuet campaigned very strongly on the European theme (much of his voting strength came from the Eastern region where there is a strong economic interest in the Community). The results indicated that the opposition candidates' stand obliged the President to take a much more active interest in the campaign for the second ballot; he did not change his fundamental position, but he did modify his public attitude and treat the Treaty as a serious problem. The Common Market does enjoy a perceptible degree of popular support; politically it is becoming more and more difficult to adopt an anti- Common Market position. The The voting bears that out. The force de frappe was not a significant issue in the campaign. The Government hardly menticned it; Lecanuet declared himself in favour of a European force, although in a very general formulation; Mitterand

was very cautious, on the whole hostile, but that did not mean that if he had come to power he would necessarily go so far as to renounce it.

The results showed that contrary to the general belief there is a keen interest among the electorate in foreign affairs. Whether this would bring about any modification of Government policy remained to be seen. The evidence of a real hard core of support for "Europe" may induce a more positive outlook. Indications were that the Government would move towards a more active involvement in the Community, but only as regards the present structure, not the architecture.

Prof. Vernant entirely agreed. He did not expect the Government to go beyond the strict terms of the Treaty; it would seek to maintain the existing framework and to develop it only so far as is compatible with French economic interests. M. Debre's appointment as Minister for the Economy and Finance bears this out.

The European question was certainly a factor in the elections. It had greatest impact among the peasants. The very real threat to their livelihood which would result from interference with the Community's agricultural arrangements must have weighed very heavily, because both opposition candidates culled the majority of their votes from that section of the electorate. Another theme which emerged from the campaign was independence. It was significant that in their various ways all three candidates took this up, even Mitterand; Lecanuet talked of independence in Europe in relation to more powerful states. These two themes, Europe and independence would be the major considerations influencing French policy.

Mr. Beaton, looking ahead to the 1967 elections, wondered whether the President could govern effectively and handle the main issues of policy without a majority in the Assembly.

M. Laloy said that if there were a massive majority hostile to the President he would have to hold new elections; otherwise he could try to come to terms with his opponents by the usual process of political bargaining, although this would be very undesirable.

Prof. Vernant did not see how any government could possibly last on such a basis, because it could never be sure of a majority on key issues. The President would either have to appoint a government which could command a majority, or dissolve Parliament. And if the new Parliament were just as hostile, the President would have to either bow to the majority, or resign.

Mr. Duchene pointed out that the President does have a means of action in his power to put questions to a referendum. On the other hand as a result of the recent election if a new Common Market crisis arose (of the 1965 type) there would be great doubts about the President's ability to command a majority. Any President in such a situation would surely hesitate before becoming involved in a comparable crisis. At the same time he believed it would be quite easy to obtain a majority grouping for internal questions, even if the Gaullist party had no absolute majority. A Lecanuet party of the Right, for example, would probably come to terms with the Gaullists on internal questions; but there would be no agreement on Europe and this disagreement would take the form of a lack of effectiveness of the kind apparent in the Common Market during the past year. This would be the most likely result of the 1967 elections.

Dr. Müller-Roschach asked if his impression was correct that in the campaign the present French Constitution was not called in question. This was important, in view of the possibility of conflict between President and Parliament. Mr. Duchene's argument was very interesting: how far would the President be able in practice to take important issues out of the Assembly and submit them directly to the electorate?

M. Laloy said there are various shades of opinion about the present constitution which could come to the fore in a more troubled period, for example some people would prefer a President above the battle. But there is no support whatever for any return to the previous constitution.

With regard to the possibilities for government by referendum, he argued that foreign policy questions are the least suitable for treatment in the very simple terms required.

Prof. Vernant believed however that it might prove practicable to appeal directly to the electorate on certain European questions (for example a proposal for majority voting in the Community) where the issue could be posed in very precise terms.

(2) The German Elections

Dr. Sommer said the new Government was basically the old government with basically the old policy, although not asserted in quite such tough terms. The old government also meant a weak government. Erhard had already lost the advantages of his electoral victory, first through the bargaining resorted to forming his government and secondly through losing the initiative in the economic field. The CDU is badly divided and Erhard's departure is openly discussed, although there is no clear successor. Thus there is a latent governmental crisis, which Erhard's weakness will nourish. Germany is also entering a period of considerable economic difficulty; keeping the economy under control will take up most of the energy of the Bundestag and the Government in the year ahead.

Partly because of these economic problems, and partly because of the snubs received recently in Paris, Washington and London, he expected a period of 'turning in'. There is the feeling that crawling out on a nuclear limb has not done Germany any good. While the Government favoured a hardware solution, it would try the committee approach first and see if it could get some of the things hoped for from a hardware solution by means which will encounter less resistance and fewer obstacles. He detected a recent recession of nuclear ambition in German public opinion. The serious press is absolutely negative towards any hardware solution and this has weakened the government's stand. There is a strong awareness of some incompatibility between German reunification and nuclear integration with the West. This is all very vague and still in the realm of mood rather than political programmes. But it is a significant change.

Dr. Müller-Roschach drew three conclusions from the elections. (1) In the campaign a strong tendency in favour of European unity emerged in the Government parties and in the SPD alike. Moreover interest is growing in favour of bringing Britain and other EFTA countries into the Community. (2) There has been no dissention from the Government's line that German security really rests with NATO and an integrated NATO system. (3) All parties are aware that the desire for reunification is if anything growing stronger and they all recognise that difficulties are bound to rise in trying to reconcile this desire for progress on the German problem with whatever decisions may be required in the line of (1) and (2).

Dr. Sommer agreed, although he detected a growing frustration with European problems. Since the war Germany has had two aims: Western or European integration, and reunification. He felt the Germans could bear not reaching one of these aims; not to reach either of them was dangerous. Therefore if further progress could not be made in the European context this would be another reason for going more into the strictly German aspects of their policy.

Herr Cornides entirely agreed with Dr. Müller-Roschach, although he suggested that the interest in NATO is primarily not as an instrument of integration but as a continuation of the American presence in Europe.

Asked by M. Vernant whether there was any significant change in the foreign policy of the SPD, Herr Cornides replied that after the election it became clearer that SPD support for the MLF policy was not quite so general: Helmut Schmid made a stronger reservation than Erler against a hardware solution. (Dr. Sommer maintained that this deviation only reflects a deviation which is growing within the government party).

Herr Cornides took issue with Dr. Sommer's reference to a "recession of nuclear ambition"; he did not believe there ever was any such ambition. Looking back over the course of MLF debate, he felt that the Germans were now getting what the Americans all along intended they should have: a conventional role, plus a committee. The US never seriously intended Germany's standing in the nuclear

field to be significantly increased, they were more interested in drawing her interest away from using her might for other purposes, such as a European force. But a great deal of time has been lost, and Germany now has to start from the beginning in a post-MLF phase as she did in the post-EDC phase.

Signor Albonetti expressed grave disquiet at the tenor of certain comments made during and immediately after the election campaign by leading German figures, including the Chancellor and Foreign Minister, about Germany's status in the world, about nuclear discrimination being no longer tolerable twenty years after the war ended, etc. The same arguments were being voiced that the British and subsequently the French used to justify their nuclear programmes. These comments had aroused concern in several European countries, and he wondered if his German colleagues would give an interpretation.

Herr Cornides said it was important to distinguish what is said in the normal course of an election campaign from statements made with reference to the non-proliferation negotiations at Geneva. No desire for an independent nuclear role was vouchsafed during the election campaign. The speech by Schroeder to which Signor Albonetti took such exception was not addressed to the German public, it was addressed to an important negotiating position where the Federal Republic was afraid that her whole position would be jeopardised.

Dr. Gasteyger took up Dr. Sommer's reference to the incompatibility between Germany's participation in nuclear sharing and a more flexible policy towards the East. Surely this dilemma came into existence before the nuclear issue arose when German rearmament was first decided upon? Is participation in the McNamara Committee likely to look less dangerous to the East, and will the East Europeans accept it as a gesture of a more acceptable policy on the part of West Germany as long as the Germans maintain that the Committee still does not meet their requirements for nuclear sharing?

Dr. Sommer agreed that the incompatibility has long been there, But in 1955 the conventional rearmament of Germany was decided on by the Western allies too and opposed only by the East. This time the nuclear role Germany was aspiring towards was opposed just as much by the West as the East. The isolation became total. Because this has been realised during the last three months, the trend is running in the opposite direction to the one Signor Albonetti described. The Chancellor's statement that 20 years after the war the post-war period has to be over must be seen in its context. Erhard said Germany did not aspire towards a national role. There is no German national nuclear appetite.

Dr. Birnbaum did not believe there was a serious nuclear ambition. But he had noticed a certain emphasis on a parity of status between Germany and other European powers, and he failed to see how this could avoid the nuclear aspect.

Herr Cornides said the 1954 treaty was a mix of a German assurance to make a certain contribution to Western defence and acceptance of certain guarantees against upsetting the balance inside the alliance, an assurance of an honourable status together with a joint declaration that the Western allies and the Germans would try to achieve German reunification. The German position is that all these goals should be kept in balance, although the weapons situation and the political and military situation have changed. Therefore if Germany is asked to make a concession for the sake of a non-proliferation agreement this cannot be treated as a separate issue from the other items in the package. Schroeder was trying to bring out this point. Because these things are linked, it is felt that an effort should be made to use whatever bargaining possibilities do exist in the nuclear issue.

Dr. Sommer added in the context of the German question, not in the nuclear question. The status problem was remediable in other fields than the nuclear. One area where the ambition for parity finds expression is in the technological field; rightly or wrongly, many Germans worry about the problem of technical spin-off.

Mr. Beaton suggested that we should miss the point if we neglected the American initiative on equality - which has been directed towards Britain and France much more than Germany. The Americans have not suggested that Germany should be a nuclear power, but that Britain and France should not be. The notion

of equality specifically attached to nuclear weapons has never been attached to any of the large number of other issues where it could be argued that the British are much worse off than the Germans.

M. Laloy argued that surely the real problem for the Germans was not the discrimination which exists now, because the Treaty of Paris contained a lot of special discrimination against Germany, but the possibility of a treaty with the USSR to perpetuate this discrimination, either through a non-proliferation agreement or through a new system of East-West relations based on restrictions imposed on a divided Germany.

Mr. Haagerup agreed with M. Laloy. He appreciated the explanation of Schroeder's remark (although it had been interpreted in Denmark as Signor Albonetti indicated); however when this kind of statement is made, its political impact in other countries has an influence upon the course of the debate beyond governmental appreciation of Germany's position.

Mr. Duchene was convinced that there is a link between the nuclear question and a possible regrouping in Europe; de Gaulle made this clear last February when he put forward the possibility of a European collective security agreement about Germany rather than with Germany. The recurrent argument in Britain in favour of the British nuclear deterrent is that it gives a place at the table; and the impression is sometimes given that relations with East Europe are more important than her commitments with West Germany. Of course US policy will be decisive, but there is a debate in the US as well as in Europe and this can lead to a very dangerous feeling in Germany. We should all show more sympathy for Germany's position. He saw something in Mr. Beaton's point but the notion of equality did first come up in Europe from people thinking in terms of European unity and in particular of equality between Germany and other European countries, and this was then taken up in the US. There is a psychological link between the nuclear question and the question of equality, and the way in which it has not been solved has added to the difficulties in Europe.

Herr Cornides said there were two ambiguities which made difficulties for the Germans. (1) Mr. Beaton's point, that there is no clear American strategy towards anything. The MLF phase has been deeply harmful to the Germans and to the alliance because it mixed up Germany's own nuclear issue with the cohesion of the alliance and with the American preoccupation with the nuclear status of Britain and France. (2) Within that phase a new ambiguity has arisen from a French policy of enhancing her own status by dwelling on the possibilities of American withdrawal and a new situation in Europe long before this will be a serious possibility. With the vision of a united Germany in a Europe united from the Atlantic to the Urals, the problem of German status has arisen, again, long before it need have done. The MLF problem alone could be solved, because Germany was not really so ambitious. But the other aspect has come up and the idea has been fostered by French propaganda and policy, directed to some extent against the Federal Republic, that nuclear ambition which belongs to quite another field amounts to aspirations towards a new role. This ambiguity would have to be resolved before Germany's real status in the next 5-10 years could be discussed.

Dr. Sommer added that what equality Germany has so far reposes in the system of integration; that is why she is so sensitive to any attempt to dismantle it, and that is what her recenttroubles with Paris stem from.

Mr. Buchan said to Herr Cornides that if no other factors had been present, a complex of pressures was working on the British which would make them anxious to try and evolve a relationship of equality with Germany, even if nothing could be worked out with France. But there is at present tremendous American pressure on Britain to stay very actively involved in the Far East, even at the expense of involvement with Europe. And it is this British involvement with the rest of the world that makes London more preoccupied with the non-proliferation problem. But the main concern is not Germany, it is India and Israel.

(3) The Atlantic Alliance
(with special reference to the article in Politique Etrangère "Faut-il Réformer l'Alliance Atlantique?")

M. Vernant said that the general premises on which the argument is based and the analysis of the present situation followed the well-established line of French policy, as expressed at various Presidential press conferences and in official statements. This policy is essentially to maintain the North Atlantic Alliance as long as the Soviet threat remains, but to put an end to national subordination in the form of integration. There was as yet no official basis, however, for the constructive suggestions in the latter part of the article.

These proposals were designed essentially to deal with the intermediate stage when we have a Europe of the seven (assuming that the French Government becomes more sympathetic in the near future towards the need for something more institutional in Europe and that the British Government eventually joins the Community) but have not yet achieved the creation of a single European government. In this intermediate period if a start were to be made with the organisation of security on a European basis it would have to take account of the British and French nuclear forces, which would and must remain under national control. Nothing in these proposals precluded a "European" solution. Indeed they went some way towards this by envisaging the integration of conventional forces and logistics and the common elaboration of the nuclear strategy of the seven.

Signor Spinelli argued that the first part of the article invalidated the second. The basic argument was that NATO is no longer satisfactory because no country today, even the US, will use nuclear weapons except in defence of her national interest. He agreed that the present system has many defects, and he was all for reform and changing the American hegemony into a healthier relationship with an integrated Europe. But the essence of the French proposal was to ask the other countries of Europe to place in France the confidence they can no longer place in the US! He found this totally unacceptable.

Prof. Vernant maintained that Signor Spinelli had not studied the article closely enough. It did not deny the value of the American guarantee to Europe or call it in question, it only declared that in present circumstances this guarantee cannot be considered as absolute. The text of the NATO treaty itself makes this clear. Nor did the article seek to substitute a French guarantee for the American guarantee. It merely presented the case for a more closely coordinated and to some degree integrated structure on the purely European level within the Atlantic alliance as a whole in which the US would have her place.

Dr. Müller-Roschach suggested that the best thing for discussion purposes would be to look at the constructive part of the article and leave aside what would seem unacceptable from the German point of view. M. Vernant had put his finger on one constructive aspect in the acceptance of a Europe of the seven, including the UK. As members of Western European Union these seven countries already have a stricter and more permanent commitment towards each other in case of aggression than exists under the North Atlantic Treaty, and this basic element of co-operation has particular importance for Germany. Nothing comes of co-operation among the seven now, because they all work within NATO; but this aspect should be given more thought and discussion. However, he feared that the problem of relations between the nuclear and non-nuclear powers would arise among the seven as it has arisen within NATO itself. Personally he had supported the MLF as a procedural system allowing non-nuclear nations to sit round the table when decisions about control of the weapons are made, to express opinions and also to exert political influence on the decisions which are taken.

Dr. Ørvik pointed out that the seven countries envisaged by M. Vernant was not the only possible basis for European co-operation within NATO. An alternative grouping consisted of the Scandinavian countries plus the US plus Germany, the "North Sea alternative".

Herr Cornides followed Dr. Müller-Roschach in praising the constructive aspects of the article. There were some ambiguities in the argument, however, for instance in regard to the US presence in Europe, which is spoken of as having only a symbolic value. The possibility of American presence in Europe is left open, but the hard core of the problem, the presence of American troops in Germany and

what this means, is avoided because the whole argument shifts onto the institutional level. Recalling his argument earlier in the discussion, he said that the difficulty for Germany was the link between arrangements for the intermediate stage and essentially long-term developments like loosening up relations with Eastern Europe. If we want an intermediate solution, all the positions within the intermediate situation must be rebalanced and we must accept that progress will be slow.

Signor Albonetti also wanted to look at the article in the most constructive light, and he appreciated M. Vernant's argument. But he wondered whether the kind of evolution envisaged on the European level was really so desirable in practice. It is no good going into something without knowing what you want from it. He entirely agreed about moving away from the perspective of Atlantic integration, but provided every effort was made to build up a really strong European community: his main critism was that the French proposals did not go far enough along this road. It was no use trying to solve the problem of relations with the US without trying at the same time to solve the problem of relations within Europe.

Mr. Buchan agreed that everyone is very frustrated with the whole machinery of the NATO organisation. Under the appearance of integration in military commands it does basically rest on coordination of national policies. On the other hand he felt strongly that people in France who wish to go for nothing but coordination were making a great mistake: he recalled the consequences in the two World Wars of the lack of integrated planning in the French and British General Staffs which had a 'coordinated' policy from 1904 onwards. If NATO were to be no more than a "simple treaty of alliance", it would make for a much sounder international system to put an end to the treaty altogether.

General Beaufre saw a lot of misunderstanding. He wanted to make two things clear. First, that in peace-time sovereign states cannot do anything else but co-operate. Secondly, in reply to Mr. Buchan, if war should break out, some degree of common military command would be essential. But is this integration? If 'integration' means one army under one permanent administration and one permanent command in peace and war, this is impossible for sovereign states, because an army is a weapon to be used only by political authority. He did not see a truly integrated European army coming into being until a single united Government of Europe exists to control it. But if 'integration' were used in the sense of some command organisation, common procurement and armament etc., this could exist at a stage prior to full political unity.

Personally he considered the first phase towards a European army to be a military command structure which has no power in peace-time; we have this already in NATO - except that the war plans are made within the framework of American strategy over which the Europeans have no power at all. The first step would therefore be an integrated European command for a European strategy: this would be allied to the American strategy, so far as the Americans would permit. General Beaufre saw as the next step a procurement system with a rational distribution of production of standardised equipment among the member countries. There might also be a European R & D organisation which would recommend certain formulas to be used when unification is achieved (because R & D takes 5-10 years to achieve something). For Signor Albonetti the important question was whether General Beaufre envisaged putting these various phases into a treaty, or whether he would rely on integration being achieved by a process of natural logic.

General Beaufre replied that he was expressing a personal conception: a treaty is a bargain between various points of view. He added that the whole problem of nuclear sharing has led to such misunderstanding because it has not been analysed properly. So long as we are national political entities, some things can be shared and some things cannot. The physical use of nuclear weapons in the event of war can be shared: this is already provided for under MC70. Secondly participation in the decision of the policy for the use of nuclear weapons can and should be shared. But the decision to use the weapons cannot be shared, because it is the supreme expression of political sovereignty. This could only be a European decision when a European Government exists. Until then, any other arrangement (like the MLF) is just a gimmick: a second strike is not a decision, because the enemy will have taken the decision which counts. Nor did he believe that possession of weapons could be shared: as the decision to use must be national, the possession must be national too. He stressed that none of these

four things are inter-connected. Achieving more osmosis in strategy does not mean acquiring more power in the decision or in the sharing of weapons. The Germans have been misled into thinking that involvement in one quarter will bring them involvement in another quarter too. And the Russians make this mistake.

Mr. Buchan agreed with much of General Beaufre's argument. He was not sure whether the integration of European armaments production and European R & D system was the same problem or two separate ones, but in either case he believed there would have to be a supranational element, because experience of attempts to agree upon a European tank, for example, has shown that purely on the basis of governmental co-operation one moves at the pace of the slowest.

He agreed basically on the question of nuclear sharing, though the argument could be carried a stage further. Decisions about things like force levels and policy decisions can also be shared. In this connection he quoted a sentence from Herr Uew Nerlich's paper: "the key to real participation in planning (is) not so much in the type of planning body or German participation in it, but rather in the quality of one's own arguments". This was equally true for the British and French as well as the Germans: we could obtain a real share in common planning only if our ideas were as good and as well worked out as the American ideas.

Dr. Müller-Roschach did not see how in terms of military organisation and preparation peace and war could be so sharply distinguished as General Beaufre suggested. Otherwise how can we be sure that the alliance will really work as an integrated body? He agreed that the decision to use a nuclear weapon must be a national one. But in an alliance it is essential for this decision to be communicated to the other partners, because this is a question of life or death for all, not just the power with the weapons. He considered it essential for the non-nuclear countries to feel that some common understanding exists if such a decision had to be made.

Mr. Bull agreed that strictly speaking the decision to fire is the supreme expression of national sovereignty, and everything else is gimmicks. But politics is nothing but gimmicks, which will mean different things to different people. For example in terms of public opinion and the alliance, there is a very considerable difference between the French and British interpretations of their policy towards nuclear weapons, although in strict logic they both retain national control of their weapons. The value of the McNamara Committee is that it is a centre of debate. If a consultative framework exists where all the allies talk to the Americans between crises, that will make a contribution to the American mind by the time the day comes for the Americans alone to decide. This aspect is too important politically to be dismissed by absolute logic.

General Beaufre replied to Dr. Müller-Roschach that his conception of a peacetime situation did not preclude efficient preparation in case we had to fight. He had always recommended two committees, to study the crisis management problem in peacetime and the kind of reaction in a crisis, the other to be concerned with readiness for war if it came and putting the various forces in common. Both kinds of committee were necessary to safeguard in peacetime the equality of the members.

General Beaufre maintained that national sovereignty counted for far more than Mr. Bull was prepared to admit. Personally he found that long experience of working in an international organisation made it hard to remain optimistic towards the supranational approach.

M. Laloy pointed out that this was not an academic discussion it had to be related to the world in which we live. We were all faced with the problem of East-West relations in Europe. Looking back to the Berlin crisis, if we had had a European command distinct from the American command no doubt the Europeans would have been very happy; but he was not sure that the crisis would have been solved more rapidly. We should not forget that we could quite easily get back into this kind of situation.

Dr. Jaquet recalled the experience of the Fouchet plan: surely France would have drawn the conclusion from this that a common political outlook did not exist among the Six? France had tried to ensure her domination in the general political sphere by using first Germany, who was in a weaker position, and then through her

the smaller powers. But the small powers resisted at that time in order to get a better position for smaller powers in a limited alliance. The Germans are facing much the same problem now.

Dr. Sommer said that in practical terms, integration for Germany means four things: (1) A joint command planning for war in peacetime. (2) A common logistical system. (3) The US presence in Europe - he agreed this was a special German preoccupation, but the article dismissed it too easily as being of symbolic value only. (4) The non-existence of a German general staff.

But at the same time as France is denying Germany a general staff (which was in the article) she is denying Germany that role in Western strategy which is the basis of German security. He appreciated the constructure spirit of the constructive part of the article. But the largest part of it, combined with the performance of the present French Government, does not encourage the German Government to go ahead and explore what possibilities there are in these ideas.

THE INSTITUTE FOR STRATEGIC STUDIES

EUROPEAN STUDY COMMISSION

Summary of Discussion at the
Ninth Meeting, London, January 14-15, 1966

14th January, 1966

DISCUSSION ON AN ANTI-BALLISTIC MISSILE SYSTEM

Mr. Alastair Buchan in the Chair

Dr. Herzfeld (invited to open the presentation) recalled that the question whether or not to deploy a defence of cities has been a major issue for the US every year for the past five years or so. So far the answer has generally been negative, but not in such a way as to preclude the possibility of going ahead at a later time. A decision either way would have a serious impact on the US military posture. Related to the question of a US defensive system is a Soviet defensive system and what impact it might have. Other possibilities such as a European system of some sort must also be taken into consideration.

Dealing first with the technical aspects of ballistic missile defence (and making clear that security considerations would prevent him from giving many numbers), Dr. Herzfeld said a defensive system has to fulfil a number of functions. First, it must see the objects coming. That is most likely to be done with radars, and modern radars can see objects several thousands of miles off. The fact you can see something does not mean you know precisely what it is. The attacker can deny the defence most of the information it needs until very late in the engagement, although if he does this he announces loudly that he is coming; the attacker cannot have it both ways. This means that a defence has perhaps ten minutes during which it knows something is coming (by standards common in this business now this is a very long time).

Second, the defence needs to distinguish the real targets from the false. Obviously a sophisticated attacker will attempt to confuse the defence with a variety of devices (for example cheap decoys, or chaff - very thin, light strips of metal which look big on a radar screen). Discrimination is the most important and the most difficult part of the problem. So far no foolproof method for discrimination has been discovered, although much research is being done and some progress is being made.

Third, the defence must launch as many interceptors as possible against the attack. Generally these are very fast rockets which carry defensive warheads to the target. Because discrimination is difficult and likely to be possible only at fairly low altitudes, the interceptors must be very fast - the defence might only have 30 seconds from the time when it can identify the threatening object to an impact (Dr. Herzfeld considered this a sufficient margin). Finally the attacking object must be destroyed, with either a nuclear or a non-nuclear warhead. A nuclear warhead has a larger radius of kill, but produces blackout of radars and this is a disadvantage during engagement; a non-nuclear warhead would not produce the blackout, but has a much smaller radius of kill and so the interceptor must have better guidance. Both possibilities must be kept in mind. (Dr. Herzfeld stated that a defensive nuclear warhead would not produce fallout over a defended city. He would not anticipate the defensive explosion to be so large that the fireball touches the ground, and if it does not there is no local fallout; and the (would-wide) fallout would not be serious).

He mentioned three kinds of defensive system. (1) A Launch Defence System, which involves identifying the missiles as they are launched and attacking them in powered flight. This has the great advantage that all the fighting would be done over the attacker's territory. Some of these systems have been studied in past years, but the conclusion is that they would be much too expensive. A LDS must be a satellite system; it would require thousands of satellites which would pick up targets, discriminate, and launch interceptors against the real targets. Reliable cost estimates were difficult, but the pick-up costs alone of such a system were likely to be tens of thousands of millions of dollars a year.

(2) A Mid-Course Defence System. An ICBM is in this trajectory for a distance of about 5,000 miles, floating through space; the apogee is 5-600 miles. The course of the missile is easy to predict. On the other hand the defence has to fire a very long distance, and it is rather easy for the attacker to conceal the real target. Mid-course defence is therefore very difficult.

(3) A Terminal Defence System, against the last stage of the trajectory. This is the system usually talked about and given greatest study by the Administration. The most interesting part of this appears as the objects get into the atmosphere, about 4-500,000 feet altitude. The radars would be over the defended areas and so would the defensive missile launching sites.

From a military point of view there are two different kinds of defensive problems: city defence, and hard-point defence. Cities are large - up to tens of miles in diameter; they are fairly soft - e.g. an over-pressure of 5lb per square inch will destroy a large fraction of the buildings and damage almost all buildings badly; and one cannot replace cities. The hard-point defence problem (e.g. of a missile silo or hardened command post) is entirely different: these are small - up to 50 feet in diameter; they can be made very hard; and it is relatively easy to build a lot of them. As a consequence hard-point defence is easier technically, because you can wait until the threat comes nearer and so have more time to discriminate, and discrimination is easier as the object has to come through the atmosphere.

Dr. Herzfeld referred at this point to penetration aids, i.e. techniques which confuse the defence. These are as important as the defensive system in this context, because (a) if thinking about a defence we must be realistic about the threat coming against us, and (b) if thinking about the other fellow's defence we must be realistic about what we can do to confuse him. He had already mentioned decoys and chaff. There are various other possibilities, including jamming which can confuse radars.

With regard to work in progress in the US, the Army is spending some 400 million dollars a year on developing the Nike-X system (the system under current discussion); this is very elaborate, and the best system that can be built. It consists of a long-range missile that will go beyond the atmosphere, Nike-Zeus, and a short-range missile, Sprint, that waits for atmospheric sortie. Complementing this is the Defender Programme in Dr. Herzfeld's own agency whose mission is to do research on defensive systems beyond the Army system, directly under the supervision of the Secretary of Defense. About 120 million dollars a year is spent on this, approximately half going into discrimination studies. Finally there are large programmes in the Air Force and Navy to develop penetration aids for the US offensive forces. He could not give exact figures, but approximately the same kind of money is spent on developing an effective offence as on defence.

Looking at the strategic considerations involved in a decision, Dr. Herzfeld said that the question whether to develop a defence must be considered separately from the question whether to deploy a defence. It made almost no sense not to develop a system. With regard to deployment, other options have to be considered: the same resources could be used to build stronger strike forces, or to equip a really large airborne army, or to double investment in other countries' economies, and so on. The effectiveness of a ballistic missile defence system is a paramount consideration. It was difficult to give a definitive answer, partly because there is considerable confusion and ignorance about this, partly because of the security aspect; but he could state some general conclusions.

First of all at this stage it is not possible to build a defence of cities which will be effective in keeping casualties really low against a large and sophisticated attacker. It would take the US five years to build a defence which would cost 30-40 thousand million dollars and which might defend 30-50 US cities. But by the early 1970's the USSR would certainly be able to make an attack against US cities which would still kill up to 80 million people. A defence like this does no more than raise the entrance price. The entrance price without a defence to destroy a city is perhaps 1-2 ICBMs; with a defence it is more - maybe 10 times more. But to be really effective it must be a hundred or a thousand times more. In other words, neither the US nor the USSR can build a defence of cities which the other super power could not overcome by building more missiles and more sophisticated missiles. (Dr. Herzfeld stressed that in this sense the

strategic balance is not affected by the case where one side builds a defence and the other responds intelligently).

It is possible, however, to build a defence against a threat which is either not very large or not very sophisticated. The US could build an effective defence against a threat from China, say; the USSR could build one against a threat from France, say. The main difference is simply one of numbers. It is reasonable for the US or USSR to talk about several thousand missiles in an attack; it is not reasonable for the Chinese to talk about several thousand missiles, nor was it planned (so far as he knew) for the French to talk about such numbers.

An entirely different picture emerges with regard to hard-point defence. The problem is as follows. In a situation where two countries can deliver approximately equal pay-loads (and the USSR is catching up the US), each country has a choice between building more missiles than its opponent, or defending the missiles it has (defending half of them would suffice for second strike capability). Defending missiles is much easier than defending cities, as has been explained. The two major factors involved in a decision are (i) cost, and (ii) the effect on the arms race. It was hard to be definite about cost - it depended on the kind of missiles, how cheap a defence could be built - but the relative costs of defending as opposed to buying more were already within shouting distance and might well come closer. And to defend existing missiles would have a less accelerating effect on the arms race than to build many more ICBMs.

Dr. Herzfeld found it hard to say whether building a defence of cities or missiles would be a threatening gesture. If country A built a defence, country B would react unless it thought the defence completely worthless. Country B could build a defence of its own, or more offence; it would have to worry about costs and the arms race. He saw an element of danger, particularly in the case of defence against cities, if country A believed that its defence was very good while country B was not impressed: this could lead to trouble arising from over-confidence on the part of A.

He closed with the remark that this theme of defence and offence is very dynamic in the qualitative and quantitative changes going on all the time. A great deal of effort is being devoted in the US to both aspects. So far as could be ascertained the USSR is quite busy working on a defence. The US has proposed a freeze of strategic delivery vehicles and deployment of defence systems, but this has not proved successful in terms of negotiability. The question arose whether it would be possible and desirable to de-couple strategic defence and strategic offence.

Mr. Foster explained that his work was in the field of evaluation (under contract to the Army and various parts of OSD) of technical and strategic-military aspects of Soviet and US missile defence; he was not at all involved on the hardware side. Much of his own work has been directed to threat projection analysis, i.e. the analysis of the projected Chinese or Soviet response and perforce projects over 10-15 years (which is the useful life expected from a system which takes 5 years to build). This involves playing the role of the Chinese or Soviet planner, and the game is complicated by a further large number of technical uncertainties.

A great deal of work is being devoted in the US to reducing current technical uncertainties about the systems which Dr. Herzfeld described. Some of these uncertainties are irreducible, however, without atmosphere testing of lethal warheads. Because of the nature of these technical uncertainties, there is a genuine basic disagreement among those working in this field, and it must be sorted out; it was difficult to say in this presentation what would happen if one particular view or another were proved correct.

By way of illustration, one way of looking at these uncertainties was to compare the cost exchange ratios (which Dr. Herzfeld had alluded to in relation to hard point defence), to look at the increment of costs to achieve the same objective, and at the relative costs to the attacker and to the defence of destroying, say, 90 missiles out of 100. Cost-exchange ratios change over time; there is a certain rate of change, and a range of targets begins to be a useful

kind of defence as the options come within shouting distance on this financial basis. Given this problem of how to measure affectiveness or cost effectiveness in the light of the very real technical uncertainties today, the problem of "projecting" this ten years hence could be appreciated. And beyond current technical uncertainties lies the problem of unpredictable technological developments. Here again, there are two contrasting views. One school of thought (led by Jerome Wiesner) argues that we have reached a technical plateau. Others argue that we are at a point of technological revolution, particularly through our learning how to put very large systems together; the US R. & D. expenditure of the order of a billion dollars a year is causing this to happen. He was convinced that additional technological things will emerge in the future that we cannot predict today.

Mr. Foster held that the real question-mark over ABM defence is whether it will occur in favour of the defence or the offence. This is a more open question than it used to be. He agreed with Dr. Herzfeld that the strategic balance between the US and USSR, in terms of today's technologies as we understand them and allowing for a wide range of uncertainties, would be relatively unaffected by a defence system on either side provided each side did sensible things. But enormous uncertainties were still left open for the future.

Moreover the problem of BM defence is just the start of the problem of a balanced defence. A country like China, for example, may lack the resources for numbers or sophistication of missiles in reply to a US defence; but she still has other options - cruise missiles or planes coming in at low altitude under the range of radars. And China or the USSR could launch attacks on the US deliberately designed to avoid the defence and create heavy fallout. Therefore fallout shelters are an important part of a BM defence system. All these options must be foreclosed, or balanced in such a way that the attacker cannot gain more from a fallout attack than from a strike missile attack. BM defence can never be a cheap option, even against a country like China, because the adversary can improve his offensive capability. The defence must be continually improved. This is a very complex and a very dynamic game.

Looking at deployment options, these consist of (i) an all long-range missile defence; (ii) an all short-range missile defence; (iii) a mix (i.e. the Nike-X system of Zeus plus Sprint). We can have mixes for defence either of cities or hard point. Thus there are six possible combinations. Mr. Foster then suggested for the purpose of the discussion looking at one possible combination and its strategic role and political implications. Four elements were involved: (A)....(B)....(C)....(D). (A) Protection of Missile sites, bearing in mind the options presented by Dr. Herzfeld of either defending the existing missiles or buying more. (B) The most likely source of the threat to the US in the early 1970's - (i) the USSR and (ii) Communist China. (C) The elements of the Nike-X system. (D) The problem of city defence. And the criteria to be applied were (i) a good cost-exchange ratio for the United States, and (ii) the effect upon stabilisation (which is broader than the arms race). On both grounds he favoured a combination of a light city defence directed against China, coupled with a hard-point defence of missile silos directed against the USSR.

Looking first at the Soviet threat, Mr. Foster argued that a Soviet attack on US cities is not a likely threat today, therefore deploying a city defence against the USSR would not be a good bet for the US from the standpoint of cost effectiveness. On the other hand the Soviets have achieved a rough equality in pay-load weight and are as advanced as the US in missile and rocket technology; therefore it is an attractive option for them to attack US missile silos). Therefore it would make sense to deploy an all short-range hard-point defence against the USSR, using the Sprint. This would be under the umbrella of the Zeus, the long-range element in the Nike-X system, so the USSR would have to penetrate both elements to knock out the missile silos; this would raise the entrance price significantly. This deployment is within shouting distance on a cost-effective basis; and it is a less de-stabilising option than the alternative of buying more - in that sense it is re-stabilising.

Turning to the Chinese threat, Mr. Foster considered it extremely unlikely that in the 1970's China would be able to attack US missile silos. She would only be able to attack cities, with a minimum deterrent

force. He could conceive of a tension situation in the 1970's of a war in Asia in which the Chinese exercise the option of using a nuclear weapon in their theatre. They might want to foreclose certain options available to the US by threatening the US with a very minimum deterrent force. So to take care of this politico-strategic uncertainty, Mr. Foster favoured deploying an all long-range city defence against her based on the Zeus coupled of course with steps to balance China's other options.

Since this would be a relatively light city defence, not of all cities, it would presumably not be too difficult for a sophisticated nation like the USSR to break it; to that extent it would have a minimum effect on destabilising the deterrent. The major de-stabilising effect would come from the entry of China a power likely to be very intransigent into the nuclear game. But if the USSR also had a light city defence directed against China (which the US could overcome as easily as the USSR could overcome the US system) this, coupled with the US system, would have a re-stabilising effect in terms of the Chinese threat because she would not be able to play the two super-powers off against each other. This kind of arrangement would in fact take a small nuclear power like China with great power aspirations out of the game: one could take them out by destroying their nuclear capability, but this would have far more dangerous consequences than deploying a defence against them. The least provocative option, Mr. Foster argued, would be to get rid of the Chinese threat during the short-term period. Of course the problem would arise of keeping up with the Chinese as they become more sophisticated. Technical uncertainties made this very difficult and complicated and he could not predict how things would develop. But the only other option was to reach agreement with China, either by detente or by arms control measures such as a freeze on strategic nuclear delivery vehicles etc. And he feared that China would be a much more difficult nation to come to terms with than the USSR.

Turning to the question of European deployment of a BM defence system, Mr. Foster found it very hard to see the logical strategic reason or the political motivation to justify deployment in Europe. The same rules apply as for the United States: to achieve a balanced defence would be exceedingly costly, and against whom would it be directed? He could not conceive of China offering the very real threat of nuclear blackmail towards the nations of Europe that she may well offer to the United States. How involved was Europe likely to get in commitment with China in the 1970's? The only possibility he could see was of perimetric attack. A Soviet threat towards Europe was real. On the other hand if it would not be too difficult for the USSR to overcome a large defence set-up in the United States she could certainly overcome one in Europe. The USSR deploys less costly missiles against Europe than against the US; moreover she has other options.

Mr. Foster was unable to see a logical case for deployment in Asia either. Asian allies such as Japan could become a target for Chinese nuclear blackmail. But just as the US has given a nuclear guarantee to Europe, she would possibly give a guarantee to Japan vis-a-vis China; he believed a guarantee would be a far better option for Japan than BM defence. This was a further argument for deploying a defence against China in the US, since the guarantee to Japan might be weakened if the Japanese believed the Chinese could reach the US and thus deter her from operating the guarantee.

Dr. Herzfeld maintained that technical uncertainties are less than Mr. Foster indicated they might be. Taking the Chinese case there is no doubt that it will take the Chinese quite some years to get the kind of sophisticated and technological deterrent that the USSR has now; it will be years before they have ICBS. On the other hand the building of large unsophisticated missiles is easy, and they may do that faster than many people say. Personally he was encouraged by the evidence that China is going down some rather conventional roads, copying the other "great powers" in the development of systems.

His main concern, however, was with the problem of stabilisation. The difficulty is that there are so few pure cases where he could point to a clearly stabilising or clearly de-stabilising phenomenon. The case of buying more missiles or defending them was the purest he could think of; but the basic

question remains whether it would not be more stable if neither side had a defence and both had more missiles. The greater the number of missiles held by each side the greater the stability, because the residue for a second strike increases in proportion however high the kill probability. Mr. Foster was probably right in his arguments for deploying a defence. But what worried Dr. Herzfeld was the fact that neither side can really know how good the defence is either its own or its adversary's. Atmospheric testing will not solve this problem (to answer the question such large tests are required that it is no longer worth pursuing. The great de-stabilising thing about any defence is that it increases uncertainty. A nation might react very cautiously, or it might become careless - it depended on the type of men in control. This is one of the factors which in the US at least keeps people who are in favour of strong arms control measures opposed to a defence. This was the argument behind the recommendation of the Committee for ICY for a moratorium on ABM defence.

Mr. Foster argued that this was inherent only with regard to the defence of cities, not silos. Surely the effect of adding uncertainty to the defence of missiles only would be far less de-stabilising than uncertainty about defence of a country's heart (its cities)? He repeated his contention that given that city defence as we know it now can be overcome by a sensible opponent (i.e. the USSR), it did make sense to deploy a city defence against an unsophisticated and intransigent opponent (i.e. China). Dr. Herzfeld agreed that the two problems were different. On the other hand would the other fellow recognise that you had deployed only a thin city defence, and if you said so would he believe you? Would the US believe evidence about a thin system in the USSR? The stabilisation vision remained a very feeble one to him.

Asked by Mr. Beaton about the defensibility of the ABM system itself, Dr. Herzfeld replied that of the two main components in an ABM system, radars and missiles, the missiles can be hardened as easily as ICBMs. With the development of the phased array radar there is no longer any problem of making the radars hard. Hardening is not a significant factor in the cost of a system: the cost is dominated by the electronics: a phased array radar may cost 2-300 million dollars. The real technical question is how hard does it pay to make the radars. If you have very few radars compared with the number of cities they must be made hard enough so that the radars do not become the prime target. It is a question of balanced cost to the offence. But Dr. Herzfeld considered this a manageable problem.

Dr. Birnbaum was concerned about the interrelation between nuclear fall-out and an ABM system. According to McNamara, the first step in a balanced defence system would be a substantial fallout shelter programme; yet Congress has turned down Administration proposals in this sense.

Dr. Herzfeld said Congress had turned down an adequate fallout shelter programme. It is true that nothing is being done in terms of small fallout shelters. But progress is being made with the acquisition of large spaces that can be used for fallout centres. Asked by Dr. Birnbaum about the time-scale, Dr. Herzfeld added that a worthwhile shelter programme would take only 2-3 years to establish as opposed to 5-6 years for an ABM system. Space would be available for 75-100 million people. In terms of balanced defence, if you want to spend four blocks of money on a defence, the first block goes on fallout shelters. A 5 billion dollar programme would be required, far beyond what is being done now.

Dr. Müller-Roschach posed three questions. (1) Would an ABM system be as effective against medium or short-range missiles as against ICBMs? (He was thinking of US vulnerability to attack from submarines or sea-borne rockets as well as European vulnerability to Soviet MRBMs). (2) Would it not be necessary to develop a defence against satellites as well as against missiles? (3) Taking all relevant considerations into account, would an American or a Soviet planner be more inclined to favour an ABM system?

In reply to (1) Dr. Herzfeld said that a combination of the long-range area defence and the short-range point defence would be optimum against ICBMs and effective against IRBMs; it would be over-designed but effective against shorter-range missiles down to 300 mile range; against low-flying long-range cruise missiles it would be useless. To further questions he made it clear that

the shape of the trajectory of shorter- as opposed to longer-range missiles is not a significant factor. Nor would it be necessary to attack the shorter-range missile at an altitude low enough to cause local fallout. So far as the US was concerned, short-range defences around targets on the west coast would take care of a 300 mile-range missile threat.

In reply to (2), Dr. Herzfeld said the real question was why should anyone attack from orbit? Except for the element of surprise, all other arguments are in favour of ground-launched attack: it takes more energy to put a satellite into orbit than to fire a missile, there is a considerable disparity in the relative accuracy, and the satellite command and control problem is serious. From the standpoint of straight military effectiveness, the ICBM is much better. Defence against satellites posed similar problems to defence against missiles. It is slightly more difficult to shoot down a satellite during its first pass than an ICBM; if the risk is taken to wait for many passes it is easy and quite cheap to destroy a satellite. The President has announced that the US has two operational systems. The US would have cause for alarm only if a country put in orbit a large number of unidentified satellites.

Asked by Mr. Grape about the possible use of satellites for confusing radars and about their value for surprise attack, perhaps combined with ICBMs, Dr. Herzfeld replied that electronic jamming and nuclear explosions were better carried out with ICBMs; and it would be much easier to confuse ICBM launches alone than ICBM launches plus phased satellite trajectories.

Asked by General Beaufre about the efficiency of an ABM system against a very small number of shots delivered to impress the adversary (now generally considered the only serious likely use of nuclear weapons), Dr. Herzfeld replied that the Nike-Zeus system worked better than any other air defence system ever built; he would put it at 90% effectiveness. General Beaufre argued however that the orbital bomb will become interesting as being more likely to reach the target in small numbers. He expected satellites to become more of a problem; they may well change the game of the submarines, for instance. Of course all the money spent on ABM research would help the anti-satellite problem too. Dr. Herzfeld saw this argument; but he held it an unlikely problem in that the weapons use is the least important one for satellites and all the other uses are likely to become the property of the United Nations. He expected open skies within twenty years.

With regard to question (3), Dr. Herzfeld concurred with Mr. Foster's view (based on studies in his Institute) that an institutional bias exists in the USSR in favour of defence; proportionately greater effort has been devoted to air defence in the USSR and she is probably relatively more interested in an ABM system than the US is. This institutional bias antedates the Soviet regime, and it is doubtful whether it is affected by US action. Global considerations do not seem to enter very much into Soviet decision-making, they have a very narrow perception of the world. Therefore if they go ahead with BM defence they are unlikely to think very much about what will be the US reaction and let that be a major determinant in their decision.

Mr. Buchan pointed out that despite this emphasis on air defence (which he agreed about) the USSR has hardly reacted at all even in political terms to the development of the British or French nuclear capability. Yet the United States is reacting fiercely to a hypothetical Chinese capability 25 years away!

Dr. Herzfeld suggested that this was because on purely technical grounds the USSR considers that in relation to her defence capability against the SAC, the V-bombers and the Mirage IV(although the latter presented more of a challenge) would be easy to take care of.

Dr. Sommer pursued Mr. Buchan's last observation. Was the US not painting a picture of the Chinese which bears no relation to the face they will put on ten/twenty years hence? What validity would predictions of Soviet behaviour based on the Russia of 1948, say, have today? As China progresses in the state of the nuclear art will she not also mellow in her approach to world politics?

Mr. Foster commented that the US view of the USSR in 1948 was expressed in a budget of some 12-13 billion dollars. The budget now runs at 50-60 billion dollars! The US view did change and this affected her national force posture; the Russians are now handled in a different role, in the concept of the balance

of terror. The question with China was whether she would add anything like the same amount to the US budget.

Dr. Sommer argued that surely what will take care of the cat will take care of the kitten too!

Dr. Herzfeld agreed that in a sense this is true: the Seventh Fleet could take China apart in a day with nuclear weapons and set her back 200 years. But that does not answer the real problem. The Chinese are not reckless as Dr. Sommer implied; they talk very beligerently, but their actions are extremely cautious. The attack on India of 1962 was an interesting example. This was the only place where the Chinese had freedom of action in military terms without directly challenging the US or the USSR. But it is also interesting that there were clear indications that before the attack the Chinese assumed that the attack would have a very disruptive effect on Indian political life as well as on the economy. They were right about the economy and spectacularly wrong about Indian political life. What he feared most in relation to China was not an overt military move so much as a threat based on a fundamental misunderstanding of the political situation - for example a threat to attack India coupled with an implied threat against the US made for purely political purposes to deter the US from offering a guarantee to India. He had asked people in India what their reaction would be if the US deployed a system which would clearly not be directed against the USSR but which would be useful against China, and was told that they would be, delighted. Mr. Foster added that he had received a similar answer to a similar question in Japan. This is quite different from the problem of deterring a war-fighting capability. How much money would it be worth to the US to be able to ignore a purely political threat?

Mr. Beaton made the point that if this is a valid argument for a light defence of the US, might it not also impose itself as right for Europe in the sense that if the Chinese could operate a basic nuclear deterrent against the US by threatening San Francisco, say, they could also deter the US by threatening London and Paris? Surely the full range of American loyalties must be taken into account.

Dr. Jaquet wondered whether, if one accepted Dr. Herzfeld's premise, the building of a light anti-Chinese defence would open up wider possibilities for a certain American disengagement from the Asian theatre. Would it permit the US to exploit more than she can now Sino-Soviet differences in relation to that part of the world, and would it enhance possibilities of building up Asian alliances against an Asiatic enemy?

Dr. Herzfeld believed there might be certain possibilities in this direction. This would not necessarily follow, however. Thinking back to the stabilisation problem, it might make the US more belligerent because she might feel she could afford to take risks.

The essential point, he believed, is that if the US can deter the Russians without the Chinese, why not deter the Chinese as well? It is a question of the best set of military tools to give to the policy makers. Some argue that a thin ABM defence is a good card for the US. Others argue that it is unnecessary: if the Chinese threaten US cities, the US can bomb the Chinese missiles. The problem is essentially political rather than strategic; it may be easier politically to take a defensive posture rather than try to disarm an enemy, however justified this may be.

Mr. Grape wanted to draw attention to a different set of uncertainties than those raised so far, first of all in regard to the effects of weapons acquisition on the national decision-making process and the interaction between a country's own decisions about weapons systems and the international environment; this was a dynamic process over time and he wondered how the Americans approached the problem of adaptation.

Another group of problems for decision-makers related to the underlying strategy, particularly whether the main interest is in a better offensive or a purely defensive capability. Third, to what extent was American policy with regard to weapons systems and ABM defence designed to pursue the contest in economic terms by imposing strains on the adversary's economy? If some interrelation between internal stability and international stability is assumed, the wise allocation of resources becomes very important.

Dr. Herzfeld found these considerations very much at the heart of the problem. Taking the economic point first, he was not sure whether it was in the American or the European interest to make the USSR spend a lot of money on armaments. One could argue either way. As an arms controller at heart he would lean in the direction of not exerting maximum pressure for development of an adversary's resources for military use. From the point of view of containing the amount spent on military use. From the point of view of containing the amount spent on military things, the option of defending missiles rather than buying more is important. On the other hand it was important to watch the effects of any change in the allocation of resources: if the USSR were to reduce her defence budget by 5,000 million roubles it would make a great deal of difference whether this sum were invested in industry or in subsidising revolution in Africa, say.

Mr. Foster commented on the economic argument. He had been trying to work out a cost ratio for the US with respect to both the USSR and China in terms of the economic trend. It was found that if a certain increment of expenditure is taken, say 10% over 10 years, the economic trend cost favours the US by a factor of 4-6 to 1, because they have a far less flexible economy and their resources are more tightly allocated. The Chinese in particular have an extremely limited research allocation; it takes them a long time to do anything qualitatively different compared with the US and USSR.

A very light ABM defence would give the Chinese a major problem which may take them 10 years to solve, while it would not give the USSR an economic problem at all. In a sense the effectiveness of these systems is based in economic terms on economic trend ratios going beyond the cost ratios. He believed that we could, and should, take advantage of a very real economic weakness in China.

Signor Albonetti argued that the West had already made one monumental mistake in regard to China by maintaining until the last minute that she was too underdeveloped economically to explode a bomb; McNamara's estimate in December, 1965 of Chinese capability was truly amazing in the light of earlier American predictions. Might the West not make such errors again?

Dr. Herzfeld replied that it is easy to over-estimate the amount of effort needed to make nuclear weapons. The Chinese succeeded because they spent and are spending so large a fraction of their disposable economic resources on this. Other countries could do the same. That is why the question of proliferation is so lively.

Going back to Mr. Grape's second point, about strategy, Dr. Herzfeld regretted that so much strategic thinking, the least likely contingency, had been devoted to the case of a spasm crisis with an all-out war between the US and USSR. The US was now finding out with its involvement in Asia that crises can build up for a long time, for example that a country can be bombed without a formal declaration of war without producing a spasm crisis. The need for a much wider range of strategic options, including the capability for waging quite limited war, had been reflected in recent defence budgets: since 1962 roughly 3-4 times as much resources have gone into general purpose forces as into strategic forces. A major argument in favour of missile defence was that it again widens the range of strategic options for the defender and narrows the range for the attacker. Even a thin defence does something against the USSR that is very important: it provides a fire break at a very low level of conflict. It narrows the choice to a peripheral attack or an all-out attack, because the force needed to penetrate a thin defence would amount to all-out war. The defender can afford to wait, he does not have to escalate.

The question of the interaction of decisions was perhaps the most important point in the whole issue. One could argue that decisions interact very strongly, or that they do not interact at all. Recalling Mr. Foster's observations in reply to Dr. Muller-Roschach, he feared that the US constituted one pure case and the USSR the other.

Mr. Duchene asked about the political line-up of forces in the United States pressing for a decision to go ahead or not to go ahead with deployment of an ABM system.

Dr. Herzfeld said several clear-cut positions could be identified. There is the school of thought led by Jerome Wiesner which considers ABM system a bad thing

because it would accelerate the arms race. At the other extreme there is the professional view that any weapons system I can buy, I want. But all those in positions of power in the US (the President, the Secretary of State, Chairman of the Congressional Committee, etc.) take a stand in favour of deploying a system providing it makes sense in terms of the technical plus political plus strategic factors raised in this discussion. (Mr. Foster added that most military men are primarily concerned about defence against the USSR and dismiss the Chinese threat as a secondary objective; advocates of hard point defence are found particularly in the Air Force. The argument for deployment against China has an appeal for the growing number of people concerned about China as an Nth power problem and who want options other than attacking China, and these are found in the State Department rather than the defence establishment).

Pressed by Dr. Sommer as to why the middle of the roaders have so far delayed a decision and as to the reasons for any change that may occur, Dr. Herzfeld said that while he could not prognosticate next year's budget, it simply had not been clear enough until now that the US would gain enough in terms of the very substantial effort in money and human resources, the political liabilities and the strategic complications. The argument was however getting more finely balanced. In reply to Mr. Buchan who raised the question of public reaction if, for example, deployment of a city defence necessitated deployment of ICBMs in public parks, Mr. Foster said that according to a recent poll, a large number of Americans believed that a ballistic missile defence system is operating and in place; they also considered it sensible to defend the largest American cities first. He believed the sociological aspect to be greatly over-rated.

Signor Albonetti commented on the extent to which the emphasis has shifted over the past 2½ years, recalling Dr. Herzfeld's own conclusions at a briefing then that no new breakthrough was possible in the field of new weapons and that deployment of an ABM system was probably ruled out on grounds of cost.

Dr. Herzfeld entirely agreed about the shift. The main things that have changed are that the US now sees possible political and military uses for a thin city defence which were not apparent earlier; secondly the usefulness has been recognised of hard-point missile defence.

Mr. Duchene took up Dr. Herzfeld's reference to lack of Soviet response to a proposed freeze on delivery vehicles. Would the decision process require further contact with the Russians on a freeze of moratorium, or would it now be mainly an internal process?

Dr. Herzfeld said the most important thing would be what the Soviets do:

At Mr. Buchan's suggestion, discussion then turned to the implications for Europe of deployment of an ABM system, either in the United States or in Europe. He put forward four aspects as being of particular interest to Europeans: (1) The effect on East-West stability at a time when West European relations with the East European countries are beginning to open up. (2) The effect on European/American relations: from the point of view of Atlantic solidarity, equality of risk and sacrifice etc. would the US in deploying an ABM system be buying options for herself not open to her allies for reasons of wealth or population density or technical considerations? Could a hostile reaction in Europe be avoided if a US decision to deploy a system were intelligently explained? (Mr. Buchan felt that deployment of thin city defence plus hard point defence would not arouse so strong a reaction as deployment of a thick city defence involving a massive civil defence programme not open to the European countries). (3) How much security an ABM system would offer Europe in terms of the Soviet MRBM threat, which is now generally considered the most serious threat to Europe: would it offer an opportunity to do something on a multilateral European basis which would not be possible on a national basis? (4) The effect on the British and French national nuclear programmes.

Dr. Ørvik and Mr. Holst raised a technical point: how far would deployment in the US be dependent upon systems being placed in Europe? How important were BMEWS? If a mid-course system were deployed would this not depend upon radar deployment in forward areas?

Dr. Herzfeld replied that the defence generally has to be within from 10 to 100 miles of whatever is being defended, and the defence must include the radars. Forward deployment of radars, BMEWS, would be helpful but not essential, and it would be dangerous to make them essential.

Mr. Foster added another consideration: the long-range Zeus defensive missile can be made into quite an effective offensive missile. This is not significant as far as deployment in the US is concerned, but it would raise serious problems of control if deployment were considered in any country close to the USSR or China, and a very sharp reaction could be expected. This problem could be met in Europe by deploying a system which would be optimum against the Soviet MRBMs; but the USSR has the option of using ICBMs against Europe, and a short-range defensive system would have a gap against ICBMs.

Dr. Sommer asked whether a sea-borne long-range system was feasible.

Dr. Herzfeld replied that a sea-borne system would be inconvenient and expensive, but it would be possible. On the other hand it would exacerbate the problem of provocation because the ships could get into the North Sea and get very close to the USSR. And it would not help defend targets in South Germany, say.

Mr. Hugh-Jones took up Mr. Buchan's first point. He could not conceive that deployment would have a stabilising effect, to the extent that introducing a totally new weapons system must disturb the state of mutual deterrence. It would also have a proliferating effect in Europe. The present move towards a detente with Eastern Europe is being conducted under the umbrella of the US-Soviet detente, and this would have to be re-thought. A weakness of the arguments raised earlier about stabilisation was that the essential thing is what is in the minds of the Russians. He could foresee another missile gap crisis arising.

Herr Cornides endorsed this last remark. Even if, like the missile gap, it all turned out very differently in the end, there would be the impression of less stability and the opening of a new phase in the arms race. It could be argued that public opinion was not keenly interested in this issue; but in a situation of tension public confusion and concern about a loss of stability could have dangerous implications. He considered this relevant to Mr. Buchan's second point: intelligent explanation on America's part could, but the danger would still be there.

Mr. Bull drew a distinction between three sorts of stability. (1) Strategic stability in the sense of the nuclear stalemate. An ABM system is unlikely to affect that except in a very remote contingency for many years ahead. (2) The stability of the arms race, in the sense of the stability of numbers of offensive missiles in the hands of the two major antagonists. Serious deployment by the US or USSR could lead to instability as the other side would probably be prodded into increasing the number of its missiles. (3) Political and psychological stability, the sort of thing we have in mind when we speak of the East-West detente. Here deployment would certainly lead to instability as people will be forced to rethink the assumptions on which policy has been based over the past few years.

M. Laloy disagreed on the last point: this would be movement, not necessarily instability.

Mr. Beaton pointed to the danger of identifying ABM systems with an American decision about ABM systems. In relation to stability the essential thing is not what the Americans decide but what the Russians decide. Nothing fundamental will have changed if by deploying a defence the US returns to the situation of the 1950's when the Russians had a deterrent to Western capability without any capacity worth mentioning against US cities. If we foresee Europe remaining without umbrellas over its cities, Western Europe will be a hostage vis-a-vis the Americans as clearly as it was in the 1950's. But if the Russians were to construct umbrellas over their cities the position would look very different and our strategy would be undermined.

Signor Albonetti agreed that Soviet deployment would constitute more of a threat Europe. But even US deployment alone could not fail to have an effect upon Europe. Resentment has been growing in both halves of Europe against the state of bipolarity in which the two centres of political decision are also the two centres of nuclear decision. Moreover the autonomy of these two centres is increasing: the Cuba crisis was handled differently from the Berlin crisis. Because it is feared that the nuclear autonomy of the super powers will increase still further in relation to the third world and to their respective allies, as well as purely political resentment an arms race is likely to develop among the less powerful nations, particularly the small

nuclear powers or potential nuclear powers.

Dr. Herzfeld stressed that whatever system might be deployed by either side it certainly would not make cities invulnerable. As to the motivation for deployment, it is entirely possible that the USSR might deploy a thin system because of their institutional bias towards defence; it would not mean that the defence was good, or that the USSR was being threatening. The same considerations of 'how good' and 'why' would apply to a US response, or decision to initiate a system. The degree of aggressiveness involved should not be over-estimated. The really big decisions tend in practice to be based on far less complicated and sophisticated considerations than expert analysis of the problems would indicate. But above all, the important thing was to react calmly to a deployment by either side and not jump to the conclusion that the detente is ended.

He saw Dr. Albonetti's argument as an illustration - regrettable, perhaps - that in political terms the rich get richer and the poor get poorer. He would argue the other way on the arms race point: smaller nuclear powers would be priced out of the field.

Signor Albonetti saw a compensatory effect, however - nuclear weapons are getting cheaper. Recovery in Europe has brought the European GNP approximately to the level of the Soviet, and once a political centre of decision were firmly established the Europeans might be able to help themselves. So many mistakes have been made in recent years that it would be wise for the Europeans to keep the option open.

Mr. Bull pointed out to Signor Albonetti that this is not a new situation; ABM deployment would preserve the perpetuity of a situation which exists. But it did not follow that a Soviet-American preponderance in nuclear terms is undesirable. He could see serious anti-proliferation arguments for it which would command support in Britain and elsewhere, not just in the US. West Europeans must consider whether they want to encourage anti-proliferation measures or not, and not be ambiguous.

Dr. Sommer considered the gamut of European reactions to an American deployment predictable. There will be those who believe it is an anti-Chinese measure and those who do not. The former will consider it proof of growing American concern about Asia at the expense of Europe; the latter will argue that it is really aimed at the Russians; all the anti-proliferationists and the supporters of arms control will be against; another school of thought will insist that the US is really acting in collusion with the USSR to reinforce the duopoly of the two super powers. Some will consider it just another McNamara brainstorm; others will decide that if McNamara supports it there must be something in it, and if something for the US why should there not be something in it for Europe too, and why not have an ABM multilateral force?

Coming back to Signor Albonetti's argument, the question whether the ABM underlines the status difference between the nuclear and non-nuclear powers would in the West depend first upon Mr. Buchan's fourth point, the reaction of the British and French.

Finally he wondered whether the European state of the art was far enough advanced to permit them to build up a system on their own. If not, would the Americans be willing to give, sell, or lend-lease some missiles to Europe? And if so, which missiles and how much would it cost? What would be the cost of a thick system against 700 Soviet MRBMs compared with a thin defence of, say 50 small European cities?

General Beaufre appreciated the American concern about the Chinese threat, although he considered it somewhat premature. But considering how the purely military threat to Europe has receded, and considering the political power of nuclear weapons, he did not see how deployment of an ABM system could add to European security. Asked by Dr. Sommer if the force de frappe would still be credible if the Russians deployed a thin system, General Beaufre saw no evidence for assuming that it would not be. It is impossible to be sure in such matters. He went on to make the general point that the deterrent today is the uncertainty attendant upon any decision; therefore he could not accept Dr. Herzfeld's argument earlier in the discussion that uncertainty is de-stabilising.

Prof. Vernant said of course Soviet deployment would raise new considerations, but he doubted whether Soviet or American deployment would have a decisive effect on the policy of the present or indeed of any future French Government. He expected the French nuclear effort to continue for some time to come. He did wonder, however, whether Dr. Sommer's line of thought might open up possibilities of Franco-British cooperation in this field and whether it would be worth exploring the implications for Franco-British-US cooperation.

Mr. Bull suggested that the first consideration would be penetration aids. Would the European powers be able to make for themselves or acquire from the Americans penetration aids to keep themselves in the business?

Dr. Herzfeld said penetration aids could not really be separated from the defence system. Acquisition would not be easy. The obstacles to the US sharing information on nuclear weapons with her allies would apply in this case too; moreover on so important a matter, how far would a European Government be content to take the US Government's word for it?

He had no doubts whatever about European capability in terms of technology. European radars and missiles are as good as the American. And the basic principles are not difficult. The fundamental problem is the cost. Full-scale testing is essential, and enormously expensive. The US Army has built a facility for penetration aids and penetration agents; this has probably cost a thousand million dollars so far, it probably costs 20-30 million dollars a year to run and 100 million dollars a year for experiments. To fire an ICBM costs 20 million dollars. The Europeans would also have a problem finding suitable places to hold tests. A joint European programme might be feasible, but it is a very difficult problem. The US considers her ABM project plus penetration aids the most difficult ever undertaken: she has already spent more than on the Manhattan Project.

Mr. Foster supported Dr. Herzfeld's argument that there is no cheap way into the game. A European consortium of the NADGE class would be very small potatoes in comparison with the effort required. Some studies have been done on a possible European deployment, but US opinion is not yet convinced that the European governments would want to undertake a programme for which so large a share of their technical resources (and not just in terms of GNP) would have to be included.

Dr. Müller-Roschach said clearly if a Soviet system were deployed both the British and French forces would be useless in relation to war with the USSR. But this did not mean they were no use at all in world policy. If the Chinese threat developed as strongly as the US seemed to imagine, the Chinese might be more cautious if a non-American delement of deterrence existed, perhaps combined with the American. He could imagine an Anglo-American submarine force in the Far East, for instance. If a North African country, for example, began to develop or acquire a nuclear capability one could imagine a Cuba-type crisis arising for Europe, and in that context a small or medium European nuclear force would be useful. Personally he favoured a European force rather than national European forces, but at the moment he was thinking of the two European forces which exist.

Mr. Buchan agreed with much of this argument. On the other hand he thought British opinion would consider this a convenient time to get out of the game. He did not see a country with so much of its resources committed elsewhere putting a great effort into penetration aids.

Mr. Hugh-Jones added that the body of opinion which has felt that the nuclear defence of the alliance should be in the hands of the US would react as Mr. Buchan indicated. But another body of opinion would argue that Britain should stay in the nuclear business and acquire penetration aids; the anti-proliferationists would advocate seeking to persuade the US to agree with the USSR on a moratorium; a fourth body would argue that we cannot afford a system ourselves, but that Europe deserves a system if the US would pay for it; a fifth would see possibilities for some kind of alliance system. All these tendencies would agree on the importance of a US decision for Britain and on the need for consultation with the US at a very early stage.

Mr. Beaton did not believe that short of a major change in the world political structure Britain would go out of the nuclear weapons business. The main expenditure at present on the British and French forces is to make them as invulnerable

as possible to surprise attack. In the British case in particular, where the whole force is being fined down to a small, simple, second-strike force, reaction to the deployment of a Soviet ABM system might be to acquire either a substantial penetration aid system or large numbers of softer, cheaper weapons. He suggested that the Americans might be over-rating the importance of numbers. If you create (as the French are) the industry to produce fissile material and a given rocket, if you have the basic infrastructure of a strike system, alteration of the numbers even by a factor of two or three may simply magnify the problems and not drive people out of the game.

M. Laloy, following up Dr. Müller-Roschach's argument, was struck by the fact which emerged of how difficult a decision would face the two secondary nuclear powers. Surely this derived from the general picture of a world in which stability depends essentially on the system of guarantees sustained by the two super powers. But the world is not politically stable; the main danger is that one guarantee may not work, with the risk of the whole edifice falling apart. In such a world, are we really better off in the present situation with small powers trying to take some independent action but not very credibly, or ought we to try to find some other alternative besides strengthening the duopoly at the expense of everyone else? He did not know the answer. It was a question of the importance of alliances and of stabilising the world on a political level in terms of crisis management, and above all one comes back to the question of guarantees.

Mr. Holst was not convinced that the rational response to a Soviet deployment would be a similar deployment in the West. What would be the reactions in Europe, he wondered, to a US refusal to deploy an ABM system?

This led to the following list of possible reactions to a Soviet ABM deployment taken as being a thin system against the US, with the estimated cost:

(1) Do nothing - i.e. continue as before (it was made clear that this included full-scale development of defence + penetration aids)
(2) Deploy a thin system against the USSR in the US. Cost: 10 billion dollars (Dr. Herzfeld made it clear that the figures were uncertain by a factor of 2)
(3) Deploy a thin system in Europe and the US against the USSR. Cost: 20 billion dollars.
(4) Try for a thick system. Cost: 30-40 billion dollars.
(5) Double the number of ICBMs plus Polaris. Cost: 10 billion dollars
(6) Deploy a thin system by and for Europe. Cost: 5 billion dollars
(7) Try to negotiate a freeze with the USSR.

Mr. Buchan argued that not only would the US have justification for (1); because of the considerable margin she still has against the USSR, she could gain political kudos for refusing to panic;

Dr. Gasteyger wondered whether (1) would make the American guarantee less credible, or make the Europeans more dependent on the American guarantee.

Mr. Holst held that the way in which the American reaction were perceived in Europe would be crucial from that point of view.

Dr. Sommer argued that if the Americans built a thin system against China they could argue that this reinforces their interest in Europe because they would have less to fear in damage from China and so would be free to pay as much attention to European problems in the future as in the past. Europe is not protected against Soviet missiles now, so he could not see how the American guarantee to Europe could be affected.

Signor Albonetti maintained that an ABM system in the USSR must weaken the American guarantee to Europe because the US deterrent will be less credible as an offensive deterrent.

Dr. Müller-Roschach was convinced that the non-nuclear countries in Europe would feel less secure psychologically if nothing were done by the US. One could not know how thick or thin such a system might be, and there would be fears of the American nuclear guarantee deteriorating. Secondly, (2) would not be considered

relevant to the overwhelming conventional attack which Europeans are used to thinking of as a possibility. Therefore either (3) or (6) would be most meaningful. The optimum would be a thick ABM system plus a good conventional force in Europe to reassure public opinion. Even a thin system in Europe and the US might suffice to balance the deterioration of the American guarantee to the non-nuclear countries. (Dr. Herzfeld emphasised the "try for" with regard to a thick system; it was not even clear if this would be possible for the US, one certainly could not say for Europe).

Dr. Ørvik agreed with Dr. Müller-Roschach that psychological considerations would be uppermost. He doubted whether many people would share Mr. Buchan's view that doing nothing would illustrate the magnitude of the US superiority. The USSR could reap considerable political benefits from even the crudest system if the right answer did not come from the West. Conversely even a pretence of action on the Western side would be better than no reaction at all.

Mr. Haagerup argued that Dr. Müller-Roschach was speaking only for Germany (Signor Albonetti added "and Italy"). In a quite unsophisticated and very non-nuclear country like Denmark, prevailing opinion would prefer a purely diplomatic reaction from the US, i.e. (1) combined with (7). On the other hand he believed the most likely US reaction would be (2), because even though the experts might say that a thin Soviet system does not make sense (unless directed really against the Chinese) surely American opinion would demand a reaction?

Dr. Birnbaum said that the likely reaction in Sweden too would be in favour of (1) and (7). Swedish opinion has not been alarmed by the trend towards duopoly. There would be greater concern about an ABM system signalling an increase in the arms race. Pressed by Dr. Herzfeld whether doing nothing would not be held to jeopardise European security, Dr. Birnbaum replied that Sweden trusted the US nuclear umbrella.

Dr. Ørvik reflected that in purely political terms, the USSR could hardly lose! Probably (1) would be the best solution, although it would still not be very good; the other solutions would be worse.

Mr. Holst seconded Dr. Birnbaum's view. He failed to see how the options would be good for the USSR. If the US favoured (2), this would just indicate a numbers race which the Russians are bound to lose. And to be realistic, options (3) and (6) are not on the board. (3) would be an American system deployed by the Americans in Europe. And a multilateral system would not make sense in terms of the reaction time: the MLF gave time for consultation, but an ABM cannot afford to wait a moment. (Dr. Herzfeld commented that a system involving the Europeans would not make much sense unless it was fully integrated to a degree rarely achieved among allies; the time available for something to be turned on would be two or three seconds).

Herr Cornides also spoke up for the first alternative perhaps combined with (7) or (6). Everything said in the discussion so far made him more convinced that everything is psychological and political in the first place. Why not therefore combine restraint with an attempt to negotiate a freeze and a look at possibilities of working out something on the European level? It would be far better to look in that direction than to rush into some new system with a missile gap scare and all the attendant misunderstandings. Most people would be terribly confused about the whole thing.

Dr. Sommer expected the debate in Bonn to revolve about (6) and (3), (6) being favoured by the European Europeans and (3) by the Atlantic Europeans. It would be a second edition of the MLF debate. Many people like Signor Albonetti would regard (6) as the last chance to build Europe, and then find that it would take an amount of integration unacceptable to the French; then (3) would be considered and that would not work out either; then McNamara would come up with some committee or other!

Signor Albonetti did not think it wise to judge other countries' security decisions. On the other hand Soviet deployment of an ABM system would be foolish because it would start a round of unpredictable things. Reaction would by no means be confined to the US. He believed the US reaction would be a mixture of (2) and (5), a little more ICBM plus Polaris plus a little thin US system and perhaps research on new weapons. With regard to the European reaction, he agreed with Dr. Müller-Roschach that if America did nothing the sense of insecurity would increase among the non-nuclear countries. Even if the US reacted with a mixture of (2) and (5), this

insecurity would not be allayed. It was a question of striking a balance between the defensive and the offensive: the more the emphasis is on offensive capability the less effect this has on the Europeans; the more the emphasis is on defensive capability the greater the impact on the European sense of security.

He believed it would lead to an increase in the nuclear programmes of the European nuclear powers, particularly France. More missiles would be required in an ABM world, not just penetration aids: if the nuclear threshhold is now 50 or 80 Minutemen or Polaris, it will become 3-400. And if the burden of this increased spending would impose a great strain on Britain and France, then the concept of a European nuclear force becomes more attractive because one of the arguments against a European system, the cost, becomes more bearable. The only solution which stays on the table is a European deterrent.

Mr. Buchan considered the last point debatable. Signor Albonetti disagreed: the GNP of Europe is comparable to the Soviet and Europe could make the effort if she had the will. Mr. Buchan maintained that the Soviet defence burden would be quite intolerable to the Europeans.

Dr. Müller-Roschach raised the possibility, if a European nuclear force should come into being, of combining it with reaction (5), double ICBM plus Polaris, as further compensation for the loss of deterrence on our side. A European force is of course not realistic at present, although he did not believe that Europe would necessarily have to be integrated: if it were possible to find procedurally binding arrangements it might be possible (although he rather doubted this) to organise a force on the basis of coordinated national governments. But if we could add to, or even replace, (5) with a European force our situation would be quite different.

Dr. Gasteyger saw two main arguments for the USSR going ahead with deployment. (1) Military Security. The USSR has no nuclear ally, and faces one major and three minor nuclear adversaries. (2) The USSR is under great psychological pressure to prove herself the leading communist power, and by proving she is the leading military power she could hope to recover some of the lost ground in the communist camp.

He suggested that the East European countries would also have an interest in the US reacting purely on the diplomatic level, because a USSR which feels more secure militarily is less likely to impede East European efforts to improve their political relations with Western Europe.

For Mr. Beaton the important consideration for the US was the status aspect, not the military aspect. By putting a satellite into orbit in 1957 the USSR put the US in a position of uncertainty to which she is still reacting; it developed into a status rout. If it is believed that this could be a major status issue, then it is not a thing the US should react to, it is something the US should initiate. The US should either react now or, if she were not serious about the status problem, stick to (1) which he preferred.

Dr. Ritter raised a more general point. The case for any of the alternatives was ambivalent to a degree, because each could be viewed from different standpoints. This meeting had mainly adopted the criterion of strengthening general security and guarantees. But was this necessarily the main consideration? For example, the view had been strongly put that option (2) would strengthen the nuclear duopoly. But this did not simply mean that the rich get richer. Another aspect was whether strengthening the bipolar order does not at the same time foster possibilities for movement in the direction of a new political order in which everything would not be so dependent upon the nuclear balance.

Dr. Herzfeld fully agreed that this was the most important question for the long run, the difficulty was to do anything concrete about it in the context of the measures available to statecraft.

Prof. Vernant wondered what the Soviet reaction would be if the US took the initiative to deploy a thin defence against China. Would it make the USSR take some initiative towards China?

Dr. Herzfeld did not see the point of the US deploying a system only against China. He would expect the Soviet reaction to a US deployment to be more missiles

plus a thin system, (2) and (5).

Mr. Foster stressed that Soviet reasoning is primarily institutional. They do have the problem of being surrounded by hostile nuclear powers, and are probably more concerned about one of the small nuclear powers doing something that may lead to a war they do not want than they are about the US. The Russians have also, historically, being artillerymen, made the best calculations they can for defence and doubled them. So (2) plus (5) would be the most likely reaction. But the Soviets have another option, because over time a thin system can grow into a thick system. Looking at this dynamically over time, having (2) gives an early option for having (4). If a thin system is conceived as growing into a thick system over ten years, say, the cost becomes much less terrifying.

Mr. Foster could not stress too highly the importance of the rate of deployment. If the USSR was seen to be proceeding very fast with deployment of a thin system, coupled with a big civil defence programme, the rate would be far more important than just what she was doing. This combined with (5) could even mean she was preparing for a total war posture. The US would therefore react very strongly. But if the US observed a slow Soviet deployment of (2), then her own response would probably be (2) plus (5). The importance of a slow rate of progress was relevant to the US civil defence programme which has been gradually escalated: In a few years' time fall-out shelter space for 130-140 million people will have been acquired, without any public excitement or alarm in the US or elsewhere.

M. Laloy asked what evidence there was that the USSR has been, is, or will be deploying an ABM system.

Dr. Herzfeld replied that it was a question of how long it takes to make up one's mind.

Signor Spinelli could understand the US as the stronger power deploying a system and the Russians reacting to it; but he could see no advantage to the Russians whatever in initiating deployment, because the outcome of the inevitable US reaction could only be to increase the disparity.

Dr. Herzfeld entirely agreed. This had been put to the Russians at least three Pugwash Conferences ago. On the first two occasions the Russians did not even understand the argument that there might be an advantage in not having a defence; the third time they said it was too late.

Mr. Buchan then drew discussion under this heading to a close.