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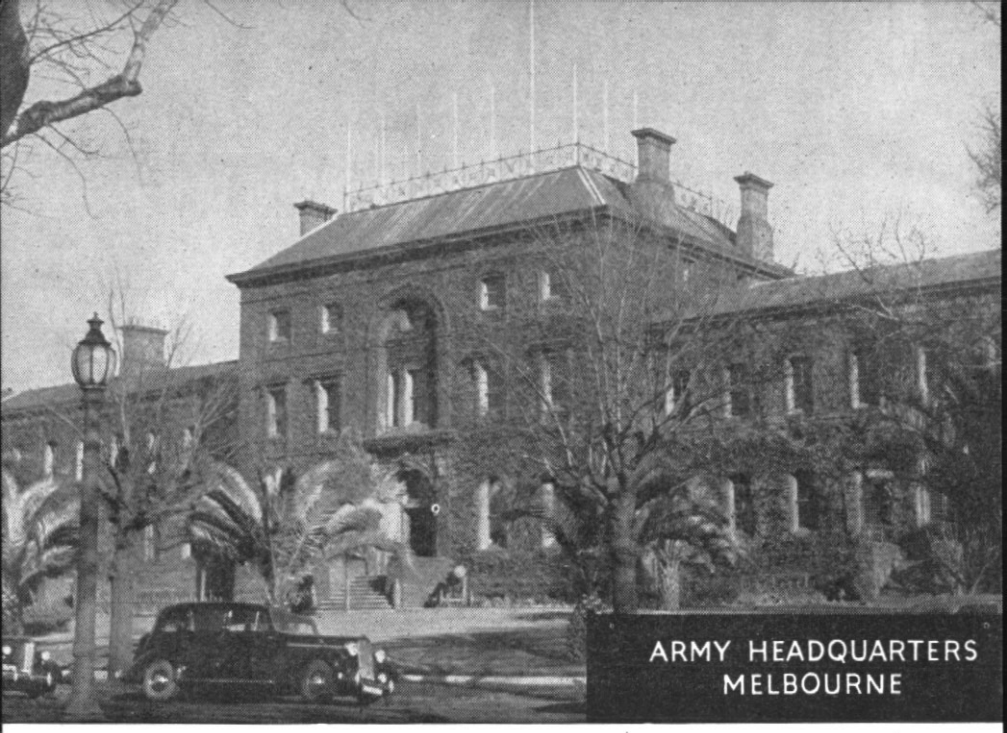

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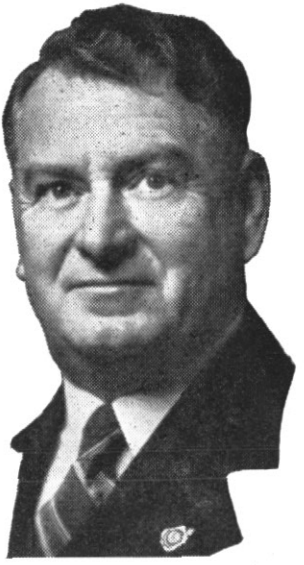
THE CITIZEN MILITARY FORCES

The Honourable Jos. Francis, M.P.,
Minister for the Army.



I want to address myself to the subject of the Citizen Forces, which have recently been subjected to a spate of criticism in certain sections of the daily Press.

The criticisms allege that the Citizen Forces are virtually dying on their feet; they are inefficient, discontented and fed up with Army muddling generally.

These criticisms are alleged to come from high senior Citizen Force officers who are bitter in their condemnation of the Government's lack of sympathy and imagination.

To put these charges at the door of Citizen Force officers is not only malicious, but a deliberate perversion of the truth.

I have been assured that every active senior Citizen Force officer dissociates himself from the criticisms that are appearing, and deplores the subversive nature of this publicity, and the great damage it is doing to the Volunteer movement.

It goes without saying that if you continually hammer at people and tell them that they have real cause for complaint, they must eventually believe it, and nothing is more calculated to undermine the morale of

volunteer soldiers than to keep reiterating the point of view that the movement to which they have given their time and energy is a weak and broken reed.

It is my firm opinion that never before have the Citizen Forces been so undeservedly ill-served by a section of the Press and misguided individuals who inspire these outbursts.

I will say that if certain sections of the community, whose allegiance sits closer to the Kremlin than to the interests of this country, desired to bring about a complete breakdown of our Volunteer movement, they are being well served by the misinformed and damaging statements that are occurring from time to time.

It seems a very strange thing to me, whilst the Government on the one hand is spending very considerable sums on publicity in the daily Press, the value of it is offset by the ill-informed propaganda and publicity that I have referred to. From this, you are at liberty to make your own inferential deductions, particularly when charges of Army muddling and Government apathy are laid at our door.

The Volunteer Citizen Forces are a part of the Army as a whole. There are some who say that we have three different Armies — a Regular Army, a Volunteer Army, and a National Service Army.

That is not true.

The various elements are closely knit together and bonded by one common purpose which cannot allow us to view them apart or as separate entities.

They are not only interrelated, but they are interdependent.

The contributory strength to the CMF is its National Service component, which feeds into its ranks approximately 30,000 National Service trainees a year.

Never before has the CMF received such a large and consistent intake of better trained and better disciplined soldiers.

But National Service would fall to nothing if it were not for the hard core of volunteers who provide the officers, Warrant Officers, and Non-Commissioned Officers, and older soldiers who constitute the very foundations on which the CMF is erected.

Beside the CMF stands the Regular Force of a size never previously contemplated. It sets a pattern and a standard for the CMF and in many other ways gives strength to the Citizen Forces which they never previously enjoyed.

Much of the criticism to which the volunteer CMF is subjected seeks to isolate it from its integrated components, and then tear it to shreds as if it were a complete and separate entity.

I know, as well as anybody else, that the Volunteer movement has been characterised since its inception by two distinct elements within itself.

Primarily, any Volunteer movement will consist of a hard core of Officers, Non-Commissioned Officers and older soldiers.

Secondly, there is a soft element of other ranks — youths in their late teens and early twenties — who, in the first flush of manhood

turn to the Army for some form of occupational interest.

This is the element that keeps going and coming as interests change and other disabilities occur, over which it very often has no control.

This going and coming characterises the Volunteer movement, with fluctuating strengths and instability of numbers.

You can take any Volunteer movement throughout the world and find that it suffers from these inherent disabilities.

If it is necessary to prove this point, I will put the Volunteer CMF of today beside its counterpart of the pre-war years.

In 1930, the Government suspended Universal Training, and from then till the outbreak of World War II, the CMF was recruited on a purely volunteer basis.

It is important to note from the Services point of view that the CMF of pre-war years constituted the major commitment against our eligible manhood.

In round figures, the strength of the CMF at the time the Government discontinued Universal Training in November, 1929, was approximately 48,000. Included in this figure of 48,000 were, however, voluntary enlisted personnel of two cavalry divisions and a component of volunteers in the other divisional units, consisting largely of Officers, Non-Commissioned Officers, and older soldiers, which amounted to a volunteer component of approximately 14,000.

By June, 1930, this volunteer component, by voluntary enlistments, had increased to 27,000.

In the ensuing five years, i.e., up to 30th June, 1935, enlistments totalled 54,000, giving an average annual intake of approximately 11,000.

It will be observed that the grand total of enlistments for this period, excluding the 14,000 carried over from University Training, reached approximately 67,000.

But, in spite of this, the active strength of the CMF by June, 1935, still remained in the vicinity of 27,000, because the wastage over the same period also mounted to approximately 54,000, or an annual average wastage of approximately 11,000.

These are irrefutable figures taken from official strength returns of the day, which also record that the strength included approximately 20 per cent. non-effectives, and that the average camp attendance was less than 70 per cent. of strength.

In July, 1948, the Government of the day re-established the CMF as an integral portion of our post-war Army. In spite of the heavy commitments against our eligible manpower, by June, 1952, a total (in round figures) of 44,000 had actually volunteered for service with the CMF, but after eliminating all non-effectives and/or non-efficients, the strength as at 30th June, 1952, was 15,750 due to an average annual wastage, over a four-year period, of 7,000.

This figure of wastage compares more than favourably with that applicable to the CMF in the pre-war years I have quoted, as in both cases it represents an annual average wastage of approximately 16 per cent. of the total volunteer intake for the period under review.

It is also important to bear in mind that today there are many more competitive calls on the class of youth who, in pre-war years, went into the volunteer ranks of the CMF, and economic conditions of today are vastly different to those pertaining in the early 1930's.

When we think in terms of the drag on the available manpower pool, we should remember that the real and effective strength of the CMF today is approximately 43,000, of which the volunteer component is 16,000 (approximately), and the National Service component 27,000 (approximately).

During this month a further 9,700 National Service men will commence their full-time training. When this is completed, they will bring the CMF to a strength of 52,500.

In addition to this, we have a Regular Army of approximately 28,000 and a much stronger Navy and Air Force in competition for manpower.

With regard to the effect on recruiting of the introduction of National Service, analysis of the recruiting figures for the CMF until the first intake of National Service men disclosed that there was a steady increase in strength, which reached its peak in the months of March, April, and May last year.

It is significant to note that the first decrease in the strength returns for the CMF was shown in the return immediately after the first intake of National Service Training.

Up to that stage, during the period from January until July, 1951, a large proportion of enlistments for the CMF came from the younger age groups.

In considering any reduction in number that has occurred in the strength of the CMF during the latter part of 1951 and the first half of 1952, there were other factors also which must be taken into consideration.

For example, over 2,000 members had sought discharge to enable them to enlist for service with the Korea Force, the Australian Regular Army, the Royal Australian Navy and the Royal Australian Air Force, in addition to those who have responded from the CMF ranks to the call for Instructors for the National Service Training Scheme.

These categories had an important bearing on any reduction in strength which has taken place during the period in question, and clearly demonstrated that the CMF, as in the two World Wars, is still making a most valuable contribution to the defence needs of the nation at a time when it is most required.

One charge levelled against the CMF is that it has failed to reach its allotted ceiling. I find that at no previous time in its history, except for the year 1939, that is, after Munich, has it ever done so.

After Hitler moved into the Ruhr in 1936, the Government opened a recruiting campaign to augment the CMF, and progressive increases occurred, viz.:—

	Strength	Establishment
June, 1936 ..	29,000	34,000
June, 1937 ..	34,000	36,000
June, 1938 ..	35,000	37,000
June, 1939 ..	71,000	71,000

These figures indicate that the fundamental characteristic of a Volunteer Army is that it vitalises itself only when the people at large

become fully conscious of approaching danger.

We may say that real danger has already appeared on the horizon of world events, but the Government, by the introduction of National Service, has forestalled the instinctive reaction to the danger which hitherto has resulted in a surge of voluntary enlistments in the Citizen Army.

The wisdom in this is self-evident, for it has given us a better opportunity to organise and train and prepare our Army for the rapid transition from peace to war footing that any future emergency will demand.

We will no longer rely on the suicidal process of improvizing an Expeditionary Force only when the danger arises.

The CMF of today is enlisted and trained as a force which, with the Regular Units fed into it, is capable of immediate expansion and mobilization on a war footing.

If there has been a spate of criticism, there has also been a spate of advisors on whom responsibility for the affairs of the Army does not, and cannot, rest. But we do not expect such advisors to know or understand the difficulties of fitting the generalities of new proposals into the exigencies of practical administration.

I cannot deal with them all, but one leading newspaper stated that the following were reasons why volunteers became fed up:—

(a) No adequate system of wet canteens, etc., etc.

(b) Inadequate pay.

(c) Government's niggardly attitude to fares and petrol allowances.

The plain truth of the matter is that the Citizen Forces have never been better paid, better uniformed, better quartered and better trained than they are today.

The tradition of service on which the CMF is founded must always call for some sacrifice.

It is not practicable to assess this financially, and to do so would deprive it of much of its value and moral strength.

The citizen soldier gets a loading of 1/6 a day on his daily pay to cover incidental expenses incurred in attending home training parades.

If the Government increased this by a mere shilling a day, the annual increased expenditure would be between £150,000 and £200,000.

We should not be expected to keep increasing the bill and adding further emoluments and benefits beyond what is a reasonable or economic limit. A halt must be called somewhere!

As to the question of wet canteens, I will only say that we have a firm policy on this, and with the very large numbers of youths attending CMF camps, there should be no need for the Government to make consumption of intoxicating liquors as easy in camp as elsewhere.

But, if it were done, it would not be very long before some bright Press Advisor conceived the idea that if counter lunches were also provided, the CMF would gain more recruits.

It is my firm belief that so much of what appears in the columns of certain sections of the daily Press stems less from the soldiers themselves than from the fertile minds

of over-eager and sensation seeking journalists.

We had a veritable spate of criticism on the Korea Force, but again it was certain sections of the Press that created the impression that our soldiers were getting a raw deal.

In World War I a Digger got a bit of gold braid to wear on his arm if he suffered a wound.

If he were physically fit, he went back into the line, and more often than enough got another piece of braid and perhaps another.

But recently, a certain Melbourne newspaper spread the headlines "Diggers Get a Raw Deal in Korea."

In setting the conditions for service in Korea, the Government has said that no one would be expected to serve there through two winters or more than twelve months in active operations.

But we are accused of handing out a raw deal because men, after recovering from a wound and judged physically fit in every other aspect, are sent back to complete the prescribed twelve months of operational service for which they initially volunteered.

With this sort of propaganda, the term "Digger" is fast losing its significance, and if it continues it must eventually undermine the morale and integrity of our Servicemen in whatever circumstances they are now or may hereafter be called upon to serve.

No one wants to see the Army return to the dog days of the early and middle thirties, but even though it was financially starved, poorly uniformed, inadequately equipped, and indifferently trained, it held at least to the fine tradition of service.

But if it wanted to complain, or air its real grievances, and it had ample reason for so doing, neither the Press of the day, nor the Government for that matter, was ready to lend receptive ears.

The Army has never had such enlightened treatment and conditions of service as exist today, and if, in spite of this, the many and varied complaints appearing in the Press really arise from the rank and file, it could only be concluded that all we have succeeded in doing is to produce a pampered Army. This I cannot and will not believe, and if I wanted better proof, I need only witness the fine record and achievements of our troops in Korea.

I do not desire to go in detail through the Order of Battle of the CMF, but I want to say that today it is scientifically organised and contains every element that constitutes a modern and efficient Army.

It includes Armoured Units, Motorized Units, Amphibious Units, Light Artillery, Field Artillery, Medium and AA Artillery, Engineers, Workshop Units, Infantry, and many others, all of which are equipped and trained with the most modern equipment.

In the pre-war years, the Citizen Forces were organised to provide a Field Force of five infantry divisions and two divisions of horsed cavalry. This organisation was in being up to the outbreak of World War II.

Its equipments largely came from five divisional sets sent to this country by Great Britain after World War I.

It was the equipment of an Army that was still in the "horse and buggy" era — it was archaic for a

war of the nature of World War II, and the organisation of the CMF on which it was equipped and trained was just as archaic.

Much time and money from very limited allocations were expended on the training of horsed cavalry divisions. Such outmoded systems of organisation and training were translated into every other aspect of our pre-war Army.

Apart from this aspect of the pre-war Army, its basic organisation to provide a Field Force of five divisions and two cavalry divisions with ancillary troops was much too large for the very limited strength of the CMF.

Under these conditions, units existed in the barest nucleus form, and such training as was possible was severely handicapped as a consequence.

It is not possible to train, equip, and organise an Army without very considerable expenditure, and reference to the following annual expenditures of the pre-war period will demonstrate how infinitely better we are providing for the Army today — notwithstanding rising costs and differing money values:—

1929/30	£1,386,000
1930/31	1,184,000
1931/32	1,050,000
1932/33	955,000
1933/34	1,109,000
1934/35	1,278,000
1935/36	1,397,000
1936/37	1,717,000
1937/38	1,717,000
1938/39	1,937,000

By comparison, the provisions for the last three financial years were:

1949/50	£17,502,000
1950/51	21,867,000
1951/52	43,234,000

In addition, on the Works side of the pre-war years the following expenditures are quoted:—

1930/31	£1,580
1931/32	6,494
1932/33	8,980
1933/34	23,463
• 1934/35	264,411

* (Introduction of a 3-year Programme, largely on Coast Fortifications.)

1935/36	748,145
(2nd Year Programme)	
1936/37	708,216
(3rd and Final Year Programme)	
1937/38	577,700
1938/39	213,730

Provisions for works, buildings, etc., in the last three years, additional to the appropriations quoted above for these years were:—

1949/50	£640,000
1950/51	5,310,000
1951/52	9,550,000

Very little of the money in the pre-war years found its way towards the betterment of the CMF. Camps for continuous training were completely tented, and conditions were primitive. We are doing our best to effect the necessary improvements, but shortage of manpower and materials has prevented us doing all that we planned.

Today the CMF does 12 days' continuous training, 12 days' home training, plus 12 days' voluntary home training. There are also ample opportunities for week-end Bivouacs and Courses. The sum of all these means that the Citizen Forces can do up to 50 days' training per annum, and many do so.

The time spent in training, however, would be useless without adequate equipment, but I have not yet

seen a serious complaint that the CMF lacks equipment.

It is, in point of fact, equipped on the most modern and scientific lines, and in this lacks little, if anything, in comparison with the units of the Regular Army.

In the latter pre-war years, the CMF did 8 days' camp training and 4 days' home training, but the opportunity for additional activity was strictly limited due to financial stringency.

There is, and can be no comparison between the training of the CMF today against its counterpart of pre-war years. One fundamental difference being that the equipment of pre-war CMF was totally inadequate, and, as I mentioned before, outdated. The Engineers were still in the pick-and-shovel stage — today they have the most modern earthmoving and mechanical equipment. The pre-war Artillery was still horsed and largely consisted of obsolescent 18-pr. guns — there was no anti-tank artillery — no anti-aircraft batteries. Today our Artillery is all mechanized.

The CMF Infantry soldier of today has a variety of weapons, but as late as 1939 he had his rifle and the Lewis Gun and Vickers Gun of World War I.

Our Light and Heavy Armoured Regiments of today are the most modern and scientific counterpart of our Cavalry Units of the pre-war era, and whose splendid traditions of World War I they have inherited.

What is more important still, the CMF leaders of today have but comparatively recently come through World War II, and they are still young enough to sustain their enthusiasm and keep abreast of changing ideas and thoughts on things military.

I could go on indefinitely drawing comparisons between the CMF of today and its counterpart of yesterday, but I do not intend to do so.

I will make this point that notwithstanding its reduced strength, we are getting far better value for our money than we ever had before.

It's a better Volunteer Army, and by its very nature today, it is a more substantial pillar of strength in our Army structure than it has ever been before.

I do not want to traverse in detail the many reasons which govern the fluctuating strength of a Volunteer Army, but I will state that first and foremost of all such reasons is the plain fact that the Government, by its National Service Policy, absorbed the major recruiting source that hitherto fed the CMF.

Also, we should remember that when the obligation for service in the CMF was placed upon youths of the prescribed age, the remainder of the eligible manhood of the country felt that they could stand back and come forward only when an emergency arises — and I have no doubt they will do so. Along with them also come many thousands of those who enlisted in the CMF and then left, for whatever reasons, after varying periods of service.

I may add in conclusion that the true measure of the Volunteer CMF rests primarily on the quality of its personnel, not quantity.

Writing a Report

Reprinted from the Canadian Army Journal from an original article in the Canadian Royal Bank Monthly Letter.

MOST of us find ourselves at some time up against the job of writing a report. It may be a business report or the report of a meeting; it may be our report as secretary of an organization, or an analysis of a situation in a factory.

Writing a report need not be the ordeal so many of us fear it to be, and sometimes find it. Like so many other things, it is not particularly difficult if we break it down into small jobs. The purpose of this article is to show, step-by-step, how to write a report. All the suggestions will not be appropriate to every report, but the principles will be generally useful.

We should try to make reports constructive. Instead of threshing old straw, or moving in a pedestrian way through an account of some convention or meeting, it is much more interesting to offer vigorous and thought-provoking interpretations and ideas of our own.

To prepare a good report we need to cultivate dependability, resourcefulness and patience, and do some hard work. Dr. Ewen Cameron says in **What Is Life?** that Mme. Curie combined the intellect of a first-rate scientist with the skill of a first-rate craftsman and the patience of a first-rate charwoman. That is the recipe for holding the interest of listeners and readers; it is the only way in which we can discover or rediscover great truths.

There are, broadly, two kinds of business reports: the information report and the research report.

The information report is to keep an executive up to date with events, developments and projects. The research report is the outcome of your investigation of phenomena. This may be in any branch of human activity, from politics to labour relations, from some crank's idea about taking electricity out of the air to a plan for extending customer use of the power already developed.

Any report upon which action may be based, or which may influence executives in this or that direction, is an important piece of work, and deserves our earnest attention. There is no more engrossing job than that of exploring in search of material for such a report.

Before Beginning.

Your work starts long before you make a motion toward your pen. You must be properly briefed, and that is a joint responsibility of you and your boss. You must know exactly what is wanted and why it is wanted. Requests for reports should refer to definite and limited problems.

This simple working chart will be of help: 1) comprehend what you are required to report on; 2) ascertain all possible sources of information; 3) decide upon what sources to draw; 4) gather information and explanations; 5) sift the evidence; 6) synthesize the acceptable evidence; 7) abstract what is to the point and discard the rest; 8) throw what is left into report form; 9) summarize your findings.

There are at least four limitations upon research for a report; time, staff, money and data. It is important that the report writer should do his best within these limitations, and his report should note any short-coming because of them. If the report is taken from the files years hence, it should provide evidence of the difficulties the research man encountered, so as to give a realistic starting point for following up or modernizing the report.

Economy of effort will be possible to the report writer if he keeps a clearly defined purpose in mind, and refuses to allow himself to be drawn away by other things, however attractive they may be.

Aesop Glim, known to advertising men through his articles in *Printer's Ink*, advises that, the problem being stated, the person preparing a report should sit down with time to make notes of all he knows about the subject. "Don't try to skimp and save words," he advises. "Go into detail. Enjoy yourself to your heart's content in writing sentence after sentence. Tell everything you know—explain the problem fully."

The Objective.

In planning the report, serious thought should be given to the need and temperament of the person for whom it is being prepared. Some persons want great detail, others will be content with deductions; some will want tables and graphs, while others will run a mile from a statistic. "What," the report writer should ask himself, "is to be done with what data by whom?"

The kind of report we are considering now—one that gives information on the basis of which an executive may take action—is a sort of diagnosis. It tells what is right and what is wrong, and gives an interpretation which serves as the executive's guide to the remedy, should one be needed.

There are two occasions when recommendations by the report writer are in order; when they are requested, and when the writer believes that because of his knowledge, experience, and other qualities, his voice is worth listening to.

All recommendations are touched with the personality of the writer of the report. The wise man will make a distinction between his conclusions, based upon the facts he has uncovered, and his suggestions, based upon these conclusions. The former are actualities, the latter are tinged with the colour of his opinions.

If recommendations are made, they should be clear and definite. They should tell what to do, who is to do it, where it should be done, at what time, and why this is recommended.

Form of the Report.

Writing a report will be much easier if you work out a form, or skeleton.

A good plan for the inexperienced report writer is to start with a statement in one sentence, setting forth the objective of the study which is being reported upon. This will focus attention upon the primary purpose. Then follow with main and sub-headings, growing out of the sentence and leading toward the conclusion.

It is surprising how greatly this plan helps to eliminate vagueness, fill in gaps in information and reasoning, and keep the writer on the track of competent thinking.

Although it does not hold true in every case, the success of many reports may be attributed to a well-written introduction or synopsis. If attention of the reader is seized at this point, he is likely to proceed into the body of the report with an expectant mind. Even when one is sure the report will be read, as when the topic is one of particular interest to a superior, it still is good practice to provide a summary telling what the report is about and what point it makes. It should be sharp in its diction, sparing of words, and careful to promise no more than is in the report.

When you come to your preliminary outline, it should be drafted so as to give you a fairly clear idea of the road ahead, enable you to judge what you should stress, and provide you with a test of the adequacy of your research.

It is not necessary, in this short mention of the form of the report to go into detail about the appendix, the table of contents, the index, and suchlike. These are features which are required only in exhaustive and lengthy reports, and they fall into place quite naturally when their use is indicated.

Chronological Reports and Research.

The person who writes a report which records happenings in the order of their times sequence must bear in mind that events sometimes follow one another in successive points of time without tending toward an end. He needs to look out for cause-and-effect relationship. His report should tell origin, history, and development. It should bring out what is the focal point, the turning point, the key event that marks a change or indicates the need for a change.

Many a chronological report is only a collection of episodes, only the starting place for research. Nothing much that is useful will flow from our work until we start asking questions and finding answers.

This leads us into consideration of the analytical report, which

starts off with the idea that there is a problem to be solved, and marches toward definite conclusions. It is not a mere collection of data; it gathers facts for and against the proposal being studied, and then goes on to assess them by comparison and testing.

The person embarking upon preparation of such a report has need of an open mind. His is a quest for truth, unbiased, unprejudiced and clear-headed. He will not suspend his researches until they have reached the point where the returns from the investigation have ceased to be really important. He will modify his thesis as he goes along, if necessary, to fit the new thoughts born of his study.

There can be no more illustrious purpose than that of the research man: "To find the truth no matter how obscure; to recognize it no matter in what strange form it may present itself; to formulate it honestly, to state it unmistakably; and to reason from it remorselessly and without regard to prejudice."

Business research is of many kinds. It may be designed to solve a merchandising or production or distribution problem; it may be called upon to find ways of effecting economies; it may be done in response to management's desire to anticipate trade developments within the industry, shifts in the economy of the country, or progress in technology.

Its leading questions are: what is true? what is best? what is necessary? how do we do it? A good test question, to be used when the others have been answered, is: if I do that, then what happens?

The writer of a report can be sure he has done a good job if he is confident that he has analysed more profoundly than others the problem put before him; that he has achieved an original focus of facts toward a desired purpose; that he has supplied, in his report, alternative courses of action, the forseeable consequences of which he has fully thought out; and that he provides not only a well-written report but a solid block of knowledge on which to build.

Not much need be said about the various kinds of analytic reports except just to name them. The case study, while incomplete in itself because no conclusions can be drawn from one case, is useful as part of a larger project. It can be enlightening, and because of the narrowness of its field, it can be thorough. The genetic study traces the development of its subject, stressing the causal sequence of events. The comparative method involves bringing together significant facts. Its chief impediment seems to lie in the danger of bias attending selection of the facts to be compared, and the perplexity of discriminating wisely.

Much of abiding value may be learned by report writers and research men who study military "appreciations". These follow logical sequence:

I. To object to be attained
II. Factors which affect attainment of the object
III. Courses open to
    A—our own side
    B—the enemy
IV. The plan.

Instruction in preparation of appreciations is given in *Staff Duties*

in the Field, issued by the War Office, London. The factors relevant to a military situation do not all apply in industrial or social life, but the thorough analysis of the problem demanded by the military people is suggestive for all who write reports.

Sources of Information.

Collecting information is the foundation of all good reporting. Thomas Edison gave this advice: "The first thing is to find out everything everybody else knows, and then begin where they left off."

While every problem will have its peculiar requirements, certain sources of data are common to nearly all; observation, experimentation, books, questionnaires, interviews, workshop and accounting records. The successful writer will be resourceful in his research activities, thinking of new approaches and seeking data overlooked hitherto.

Data may be primary or secondary. Just as in law the evidence of an eye-witness is more valuable than that of a person who testifies at secondhand, so in business and other reports the fruits of observation and experimentation rate high marks. He is a wise report writer who applies, whenever possible, observation and experimentation to check the findings of others; he is likely to remain unremarkable for his work if he merely echoes the opinions of others, believes things because others believe them, and uses only books and papers with which he is in complete accord.

Secondary sources depend for their value upon their accuracy, their acuteness of valuation, the validity of their reasoning, and the applicability of their conclusions to the case being studied.

No statement is more reliable than its source. The report writer must spend long hours in gathering facts, arranging them, interpreting them,—and then as much time again in checking the accuracy and worthwhileness of what he has in his hand. It is useless to quote a writer unless he is known to be competent in his field. It is dangerous to give the opinion of a man unless he is recognized as being unbiased, up-to-date and in all respects reliable.

Writing the Report.

Having gathered the facts and laid them out in order, we must compose our report.

This is a time when a writer wishes to be alone. John Ruskin had circulars which he used to head off visitors, invitations and letters. They read like this: "Mr. J. Ruskin is about to begin a work of great importance and therefore begs that in reference to calls and correspondence you will consider him dead for the next two months."

Literary skill, in whatever field it is exercised, means ability to present a subject as accurately and as vividly as possible. We should at least write our reports as if we were interested in what we are trying to write, and when we do so we have gone a long way toward giving our reports significance.

The report writer needs to analyse, and group, and marshal his facts into order. He must classify and conquer the elements of the

chaos around him before he can hope to appeal with any force to the intelligence of other people. In this process of viewing the whole situation and at the same time seeing its components, the writer will detect incongruities to avoid and discern a path to follow.

These are skills which come only, so far as we know, with practice, but there are some hints about the process of writing which apply in all circumstances.

The report must be practical. We have a loose way of thinking of a realist as one who not only sees things as they are materially, but acquiesces in them; let us rather, as report writers, consider ourselves as being realists in the sense that we understand things as we have found them, not as we would find it convenient to believe them.

The report must be complete. We must have walked all around the matter about which we are reporting, seeing the good and the bad, the perfect and the imperfect, the desirable and the undesirable. We must have provided adequate proof for our favourable and our unfavourable findings. Do not be content with one opinion; it may be the wrong one. As Cicero once pointed out, nothing is so absurd that someone has not called it profound; nothing so profound that someone has not called it absurd.

The report must be concise. It may be as long as a roller towel, or as short as a message on a post card: length is not the criterion. Conciseness does not consist in using few words, but in covering the subject in the fewest possible words that will express what is in the writer's mind.

Here is the story of the Odyssey in 79 words: "A certain man is away from home for a number of years, being closely watched by Poseidon and stripped of all his companions, while his affairs at home are in such shape that his money is being squandered by wooers of his wife, and his son is being plotted against. After being shipwrecked by a storm, he arrives home, makes himself known to some, and attacks the wooers, with the result that he is saved and his enemies destroyed." In giving us this gem of condensation in his *Poetics*, Aristotle remarks: "That is the real story of the Odyssey. The rest is episodes."

We recall Prime Minister Winston Churchill's wartime memoranda, demanding that his cabinet ministers confine their reports on the most momentous matters to a single page. "It is," he told the Secretary of State for Foreign Affairs, "sheer laziness not compressing thought into a reasonable space."

The report must be clear. Only the careful organization of facts and interpretation will enable the reader to follow what is to the writer a clear-cut line of reasoning. The art of good prose resides not so much in the swing and balance of the language as in the marshalling of argument, the orderly procession of ideas, the disposition of parts so that each finds its proper place. The writer misses his target if the idea in his mind is not received with understanding. As Alice said after reading *Jabberwocky*: "Somehow it seems to fill my head with ideas—only I don't exactly know what they are."

Use of trite expressions shows that the writer is in a rut. If he has no imagination in his language is it likely, the executive will ask, that he exercised any imagination in his analysis of this problem?

There is no place in good writing for proverbs, saws, and tinkling aphorisms.

Foggy language detracts from the force of writing, and use of words loosely may well vitiate all usefulness that might have been incorporated in a report. We say nothing against trade, occupational or professional jargon, so long as the report is solely for people who are on speaking terms with it. That sort of talk is not infrequently the only kind in which a writer can convey the true meaning of his thought to a particular audience. But jargon has no place in reports which may be read by the uninitiated.

The report must be intellectually honest. The facts must be scrupulously weighed and properly evaluated, and the writer must sincerely attempt to present something that has a judicial quality. He will draw a distinct line between what he has found to be factual, what is his opinion, and what he sets up as a hypothesis.

The report must be readable. We cannot afford to assume that our report will be read because the boss is interested in the subject. We should try to add to the clarity of our presentation something that will lift it above the ordinary.

There may be an ivory-tower disposition toward decorum, leading us to think that research requires a depersonalized manner of writing. The truth is that nothing written is useful unless it is attractive enough to be read. We are entitled to be as brilliant and interesting as we can be, so long as we observe the requirements of correctness, relevance and the objective.

And Having Written:

Having written it, the writer would be well advised to forget about his report for as long as time permits. If he tries to make corrections and improvements as soon as he has finished the writing, his memory of what he meant to write may be so strong that he will overlook the shortcoming of what he actually wrote.

Here are some questions to ask at the time of revision: is my report fair, broad-minded and dignified? Have I used enough imagination in presenting the facts? Have I answered all the pertinent questions likely to arise in the reader's mind? Does my report read as if a human being wrote it?

It is well to read the report aloud: if it is easy to read you may bank upon its being easy to understand. If you hesitate over a word, a phrase or a sentence, take a second look.

Finally, don't allow yourself to be lulled into feeling that writing a report is an easy thing to do.

The writer who achieves distinction of expression, conciseness, directness—and, if the nature of his work permits it, dramatic quality, beauty of rhythm, and some adventurousness of phrase and idea—has not done something miraculous. He has worked hard and intelligently.

The Campaign of Ulm and Austerlitz

A STUDY OF NAPOLEONIC STRATEGY

Part V.

WITH the arrival of the Grand Army at Brunn a pause ensued in the operations. Both sides needed a little time for rest and reorganization.

The general situation in the theatre of war on 26th of November is shown on Map 11. In addition to the troops shown on the map the Russian Imperial Guard was approaching Olmutz from the north-east and the Austrian Archduke Ferdinand was collecting a force further to the north.

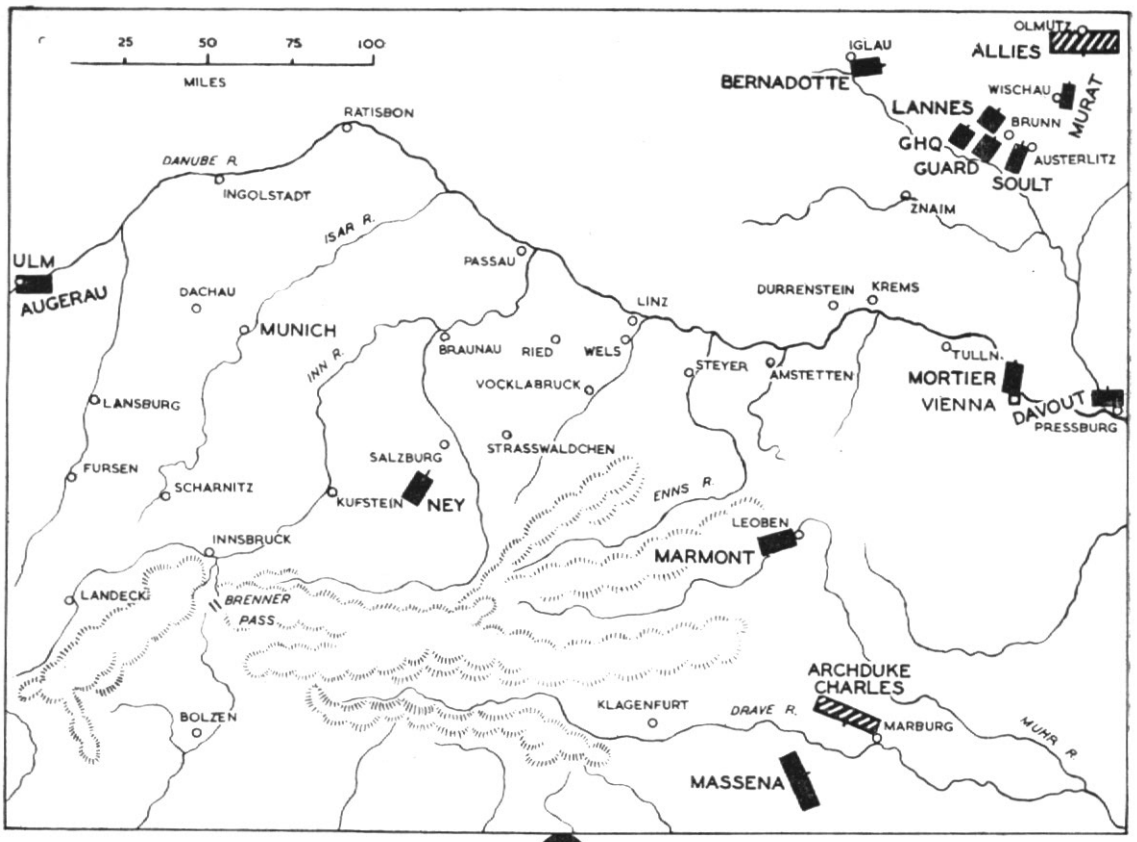
Study of the map shows that Napoleon had concentrated the bulk of his army in the Vienna-Austerlitz-Brunn area, but had stationed security detachments in his rear to guard his communications and to facilitate his retreat should this become necessary. Altogether he had about 75,000 men within striking distance of the Austerlitz-Brunn area.

With the arrival of the Russian Guard the Allied army at Olmutz mustered some 90,000 fighting men. This gave them a superiority of 15,000 at the front. The Archduke Charles, with 40,000 troops, was marching to join them by a circuitous route through Hungary, while the Archduke Ferdinand had about 15,000 men under training some distance to the north. Although Prussia had not yet declared war on Napoleon she had ordered general mobilization, and it seemed only a matter of time before her army would move against the French rear.

On paper the situation of the Grand Army was becoming dangerous, and a commander of lesser stature might have withdrawn "while there was still time." But Napoleon, resolute and confident, had no intention of retreating without making a supreme effort to obtain a final decision. As he saw the situation his only problem was to bring about a battle on favourable terms as soon as possible.

The Allies' Problem.

In the Allied camp friction between the Austrians and Russians was steadily increasing. The for-



II

General Situation on 26th November.

mer bitterly resented the taunts of their allies and the barbarous habits of their troops. The Russians, on the other hand, complained that the campaign had been almost lost through Austrian incompetence. In this happy atmosphere the Allies proceeded to decide upon a course of action. They had to make up their minds quickly because, owing to the rapid and totally unexpected retreat, no supply depots had been formed anywhere in the area, and the surrounding districts were being rapidly denuded of food and forage.

Since the Allies could not remain where they were, they had three courses open to them:—

1. Move south-eastward into Hungary and junction with the Archduke Charles.
2. Fall back towards the Russian frontier to tap fresh sources of supplies.
3. Advance at once and bring Napoleon to action.

Although they had a numerical superiority the third course was not as sound as it might appear. Many of the Austrian units had only recently been raised and lacked experience, training and cohesion, while the units which had been through the retreat required time to recover from their dejection and exhaustion.

If they moved into Hungary and joined the Archduke Charles, that officer's 40,000 men would bring the Allied army to a total of 130,000. Once the junction was effected Massena would be free to join the Grand Army, but this would bring Napoleon's strength to only 105,000. But, because of the lengthening of his communications fewer than this number would be available for battle.

If they retired towards the Russian frontier they would move into country well stocked with food and forage. They would probably have to forego the junction with Charles, but they would receive instead a draft of 12,000 Russians marching to join them. If Napoleon followed them his strength would be reduced by security detachments, and they could hope to bring him to battle with a superiority of some 30,000 men.

It is clear that an Allied retreat either towards Hungary or towards Russia would improve their supply position and increase their fighting strength, while adding to Napoleon's difficulties and diminishing the number of troops he could bring into action. There was also the distinct possibility that Prussia would intervene on the side of the Allies at an early date.

It is apparent, therefore, that the Allies had everything to gain and nothing to lose by a withdrawal. Their proper course was to postpone a decision and build up their strength while weakening that of their opponent.

Napoleon's Problem.

Napoleon saw clearly that an Allied withdrawal would be extremely inconvenient for him, and could have the effect of forcing his own retirement without a decision being gained. He desired, therefore, to bring about a battle without delay. But because of his inferiority of strength, he did not wish to attack the enemy in defensive positions of their own choosing. His problem was to induce the enemy to attack him and then, at the right moment, reply with a counter-offensive.

Napoleon saw the three courses open to the Allies as clearly as they

did, and he was well aware of the difficulty they would have in taking a decision. He resolved, through the use of stratagem, to induce them to arrive at the decision most favourable to himself. Accordingly he sent Savary, his senior aide-de-camp, to compliment the Russian Tsar on his arrival in the field, to express his esteem for the Tsar's talents and his desire for his friendship, and to suggest to him that it was an opportune moment to enter into an arrangement mutually beneficial to France and Russia. At the same time he began to thin out and draw back his outposts, and ordered the detachments which remained in position to stand strictly on the defensive.

While the effects of these moves were developing Napoleon and his formation commanders thoroughly reconnoitred the ground in the Austerlitz-Brunn area.

Allied Reactions.

At Allied Headquarters two schools of thought were advocating opposite courses. Tsar Alexander, nominally in supreme command, was anxious to match his fancied military talents against his doughty adversary. Kutusoff, the senior Russian field commander, favoured retreat, but was not strong enough to openly express opposition to his sovereign's ideas. The older, and more experienced, Russian commanders, Bagration, Miloradovitch, Langeron, Docktoroff, as well as the Austrian Prince Liechtenstein, all openly argued for retreat. All the younger officers clamoured for immediate attack. Weyrother, who had succeeded Mack as Austrian Quartermaster-General, was the only senior officer who supported the younger group.

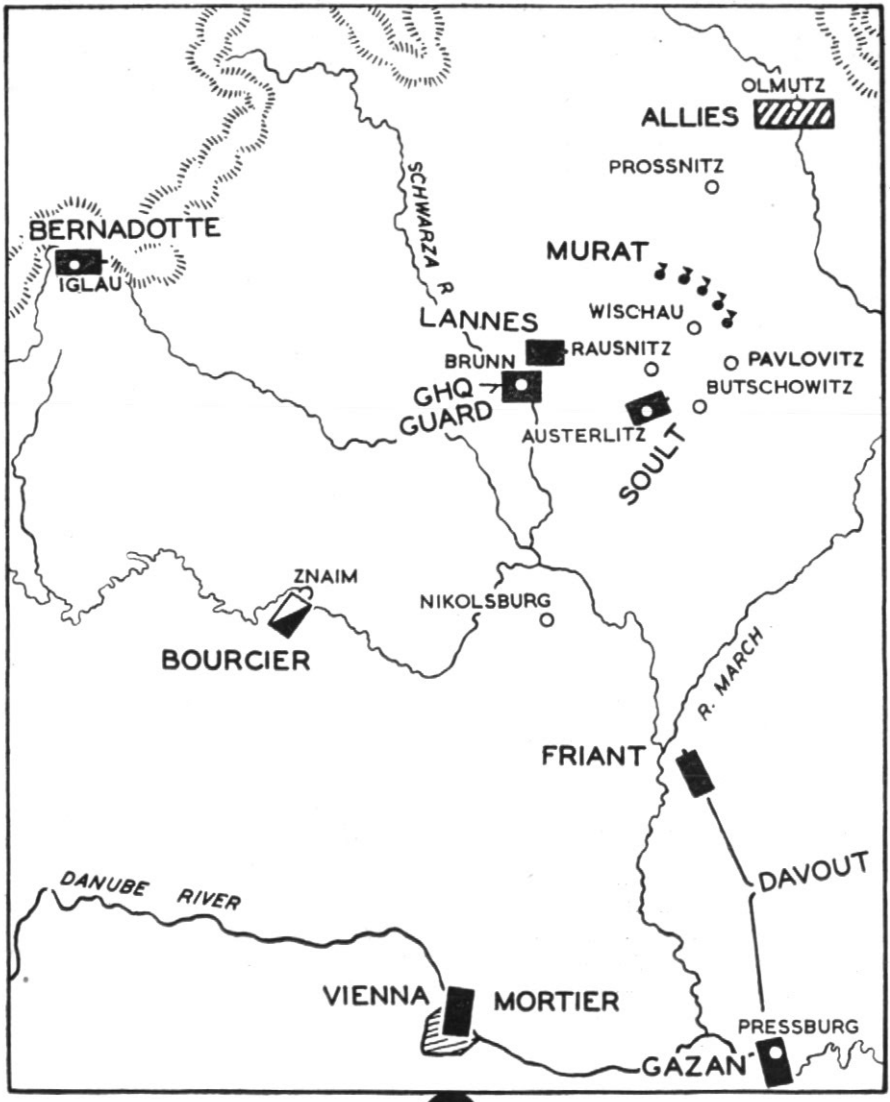
While the argument was at its height Napoleon's envoy arrived. In the Frenchman's suave compliments and in his implied suggestion that France and Russia might make a deal at the expense of Austria, the Allies saw an attempt to divide them. From this impression they immediately drew the conclusion that Napoleon was too weak to fight, that he wished at all costs to avoid a battle, and that he might even be contemplating retreat. The objections of the older officers were swept aside, Weyrother and the Tsar carried the argument in favour of an immediate offensive.

The Allied staff had failed to penetrate Napoleon's subtle design, which was not to divide them, but to unite them in a course of action he ardently desired them to pursue. They fell into the trap and resolved to advance at once with the object of passing around Napoleon's right, cutting him off from Vienna and forcing him northward away from his communications along the Danube.

Opening Moves.

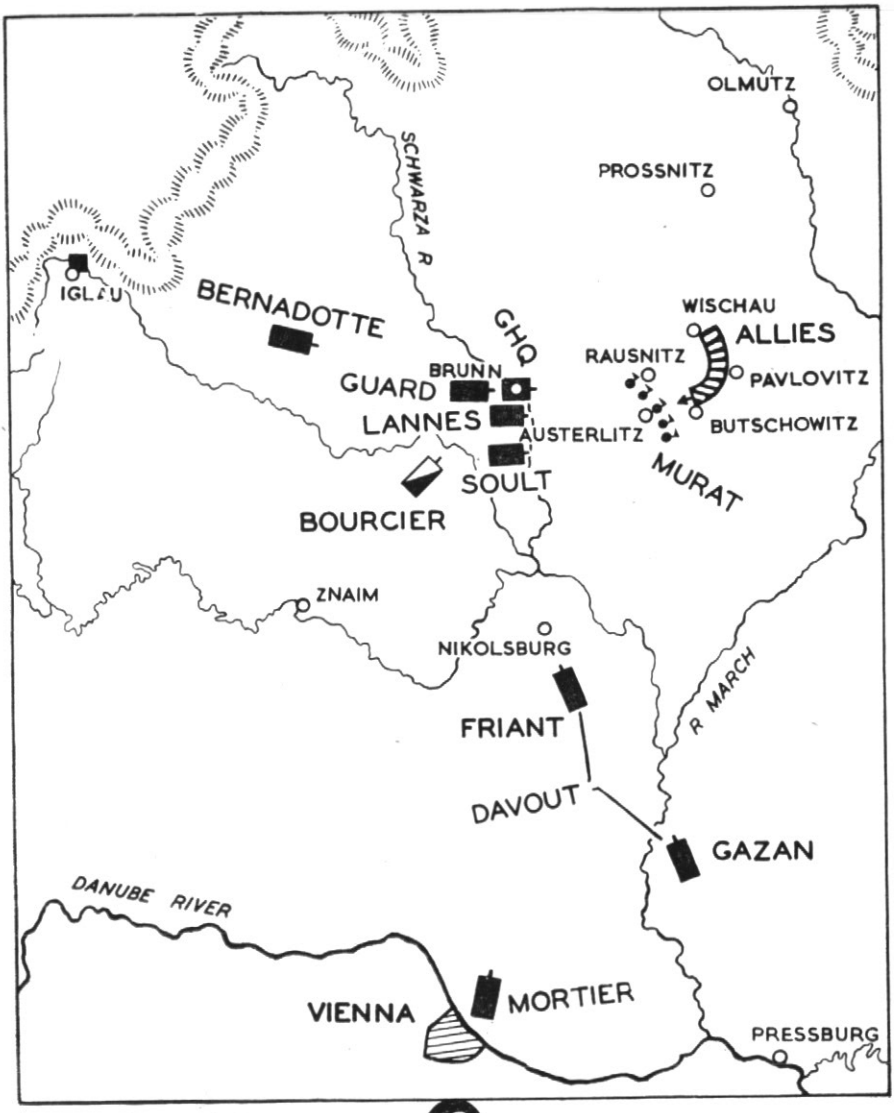
The situation in the Vienna-Pressburg-Olmutz-Iglau-Vienna area on 26th November is shown on Map 12.

On the 27th the Allies advanced to Prossnitz. On the 28th their advanced guards occupied Wischau, from which Murat withdrew after offering only light resistance. On the same day Napoleon ordered Klein and Bourcier to accelerate their march towards Brunn. Early on the 29th he ordered Bernadotte to concentrate immediately south of Brunn, leaving a Bavarian division in occupation of Iglau. Davout was directed to concentrate at Raigern, and Mortier was ordered up from Vienna.



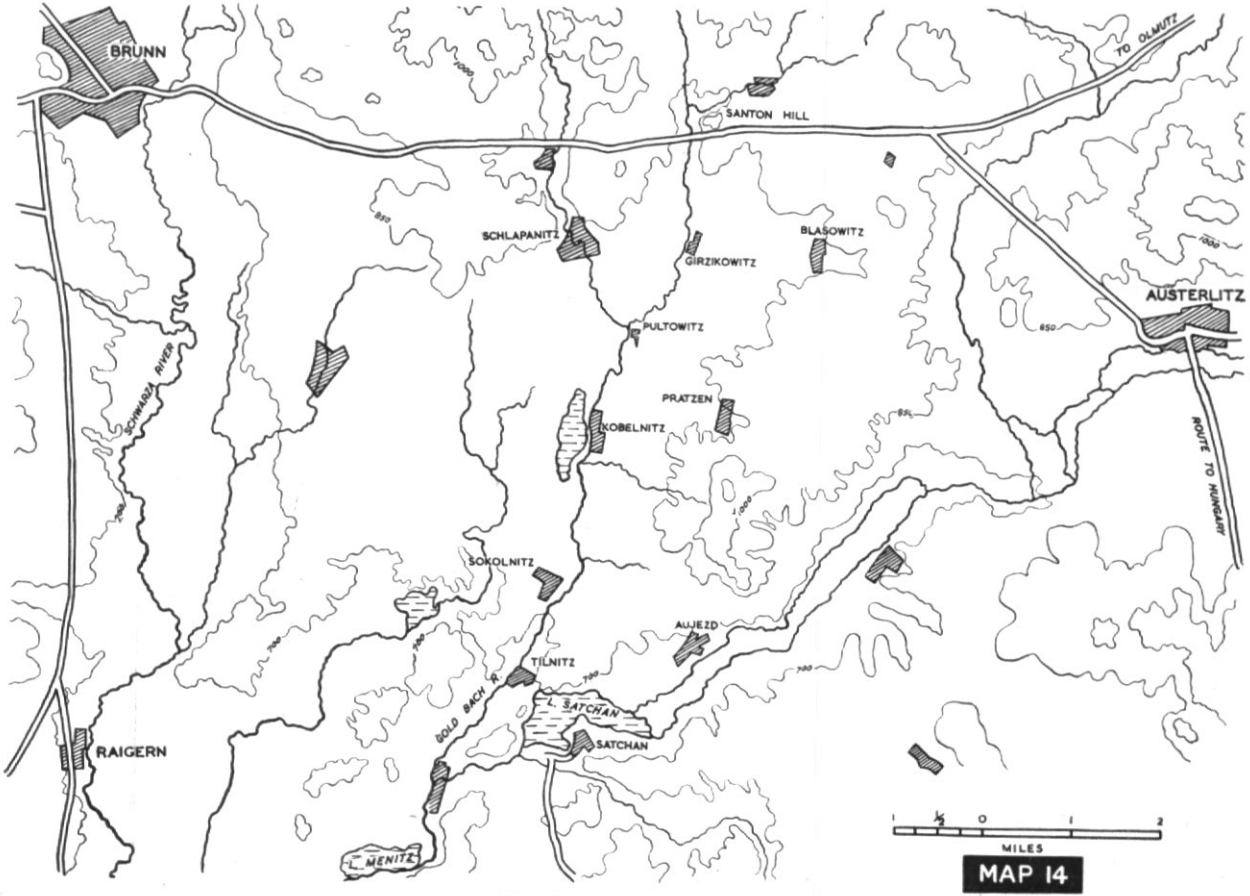
12

Situation on 26th November.



13

Situation on 29th November.



The Field of Austerlitz

During the day the Allies passed through Wischau and then turned off the Brunn-Olmutz road towards Kutscherau. On the 30th, moving very slowly, they reached the Pavlovitz-Butschowitz area.

Although they had some 16,000 horsemen available, the Allies made little use of them, either to screen their movements or to obtain information of the French dispositions. On the other hand, Murat's numerous and active patrols, unmolested by hostile cavalry, fed a constant stream of information to French Headquarters.

By the afternoon of the 29th Napoleon was sure that the Allies intended to strike at one of his flanks. In order to encourage them he simulated retreat by withdrawing all his infantry behind the Goldbach stream, leaving only a screen of cavalry to hold the high ground west of Austerlitz. (Map 13).

The Field of Austerlitz.

Napoleon and those of his formation commanders who had reached the area spent most of the 30th reconnoitring the country in the Austerlitz-Raigern-Brunn area. This area is shown on Map 14.

The principal feature of this area was formed by the Pratzen Height, which extended from Aujezd in the south to Santon Hill in the north. The summit of these heights formed a plateau of considerable extent, while their slopes and valleys afforded good cover for the movement of troops. South-west of the Pratzen the Satchan and Menitz Lakes were frozen over, as was the marshy ground in the valleys.

The line from Satchan Lake to Santon Hill obviously offered a fine defensive position, behind which the Goldbach stream was no obstacle to the passage of troops. Further back the line of the Schwarza offered another good defensive position, its right anchored on the village of Raigern and its left on Brunn.

Surveying the Pratzen Heights Napoleon said: "If I wanted to prevent the enemy passing, it is there that I should post myself. But that would lead only to an ordinary battle and I want decisive results. If, on the other hand, I draw back my right and the enemy passes by these heights he is irretrievably ruined."

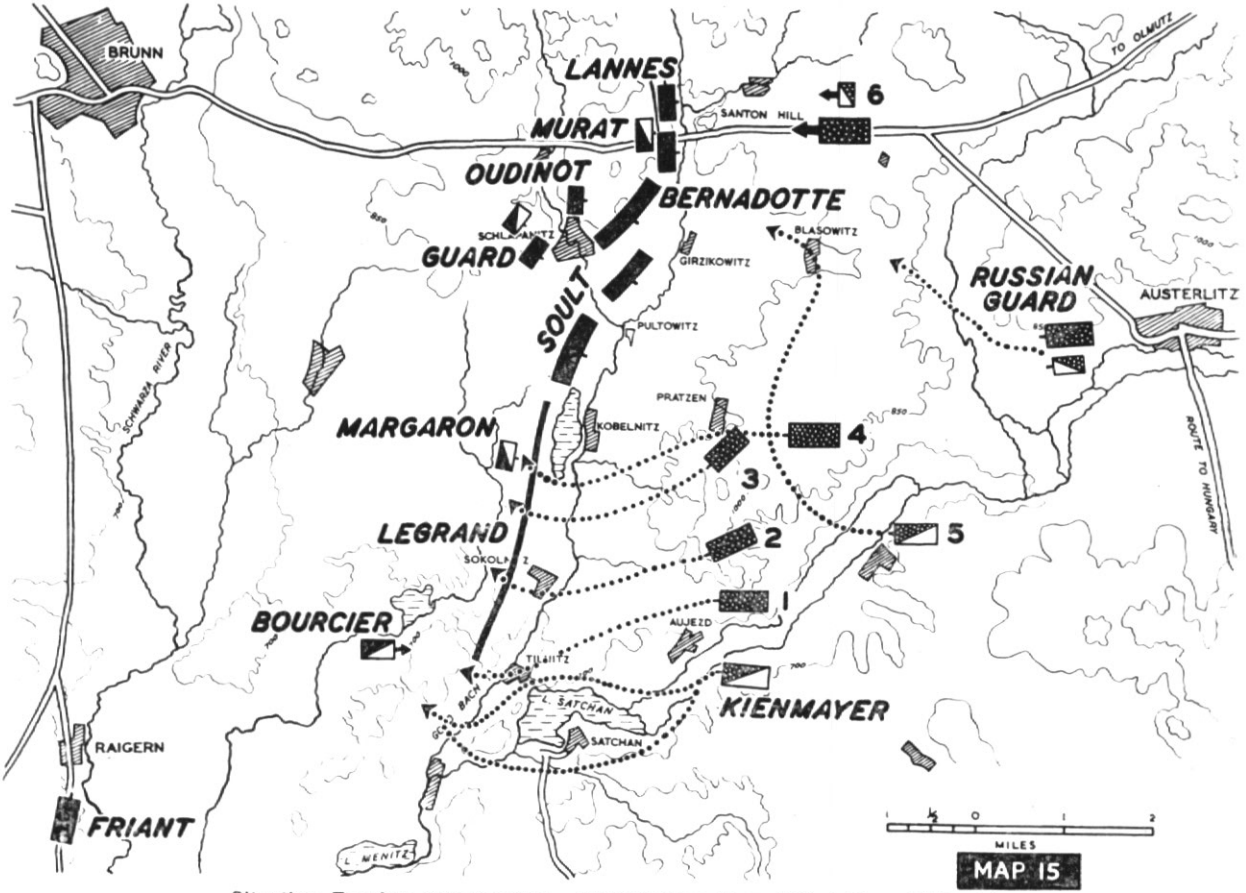
Napoleon now proceeded to bait and set the trap. He ordered Lannes to fortify Santon Hill, and to undertake other activities which would suggest a French concentration on their left. At the same time he drew back his right as if in fear.

The broad object of these manoeuvres was to induce the Allies to concentrate the weight of their attack against the French right, the point of apparent weakness and the point where tactical success would achieve the greatest strategic results. But, because of the apparent French concentration on their left, the Allies would have to send strong forces to pin that flank to its ground. Further, since they could not be strong everywhere, they would of necessity be relatively weak in their centre. And it was into their centre that Napoleon planned to launch his counter-stroke.

On 1st December Napoleon saw with delight that the Allies had taken the bait. "Tomorrow," he said, "that army is mine."

Napoleon's Orders.

On 1st December Murat withdrew his outposts and the Allies occupied



Situation, Evening, 1st December. (Dotted Lines Show Allies' Plan of Attack.)

the Pratzen Heights. The dispositions of the opposing forces on the evening of this day are shown on Map 15.

The French army lay along the west side of the Goldbach stream. Its right, covered by the Satchan and Menitz Lakes, was refused. Its left rested on the strongly fortified and garrisoned Santon Hill.

Lannes' corps held the extreme left behind the Santon and astride the Olmutz-Brunn road. Murat's cavalry was on his right rear, also astride the main road. Bernadotte's corps was formed on Murat's right, its right in front of the village of Schapanitz. Soult held the sector from Girzikowitz to Kobelnitz with two divisions (Vandamme and St. Hillaire). His third division (Legrand) formed a screen from Kobelnitz to Tilnitz and behind the Satchan Lake. Soult's corps cavalry under Margaron was behind Legrand's left, while Boucier's dismounted dragoons were coming into position behind his right. Davout's corps headquarters had reached Raigern and his leading division (Friant) was approaching that village on the Vienna road, having marched 90 miles in 48 hours. Davout was to command the right wing, including Legrand's division, from Kobelnitz southward.

The villages of Girzikowetz, Pultowitz, Kobelnitz, Sokolnitz, and Tilnitz, covering the crossings over the Goldbach, were held by detachments of infantry.

The general reserve comprised Oudinot's grenadier division stationed on the northern edge of Schapanitz and the Imperial Guard immediately west of the same village.

It will be seen that the army was deployed over a frontage of about six miles, with the preponderance of its strength concentrated a little to the left of its centre. Advantage had been taken of all available cover to conceal the dispositions from the enemy.

At 8.30 p.m. that evening the Emperor assembled his marshals and issued his outline plan, the gist of which was:—

"It is now clear that the enemy intends to contain my left, march across my front, crush my right flank, roll up my army from right to left, and drive it into Bohemia. To do this he must weaken his centre to the extent that it will be not much more than a link between his two wings.

"Marshall Davout will ensure that my right wing holds its ground. Similarly, Marshal Lannes will hold the left wing positions and, when the main counter-attack has taken effect, will attack the enemy opposed to him.

"On my order Marshal Soult, followed in echelon by Marshal Bernadotte, will capture the Pratzen Heights, Soult then to prepare to wheel right against the enemy's left rear.

"Prince Murat will have his cavalry, and the corps cavalry of Marshals Bernadotte and Lannes in column of regiments ready to follow Bernadotte on to the Pratzen.

"Oudinat and the Guard will probably be required to follow Murat and later Soult.

"All troops will be kept concealed from the enemy as long as possible.

"At 7.30 a.m. in the morning all the marshals will report to the Emperor's bivouac for final orders."

If these orders are followed on the map it will be seen that Napoleon intended to cut the Allied army in half and then fall upon its two isolated wings.

After issuing his orders Napoleon rode around the bivouacs to explain to the soldiers his plan for the morrow. Everywhere he was greeted with enthusiasm, and the men made torches of straw twisted around sticks to light him on his way. Watching the lights from the Pratzen, the Allies thought Napoleon was burning his stores preparatory to a hasty retreat. Their only concern was that he might escape them.

Allied Orders.

The Allied army was formed in six columns and a general reserve. On the evening of 1st December they were disposed as shown on Map 15.

At midnight General Weyrother, who had been appointed to the supreme command, assembled his commanders and gave out the following orders:—

"Column 1 (24 Russian battalions) —General Docktoroff—To march by his left by Aujezd on Telnitz; after passing Telnitz to move to his right until his leading troops are parallel to those of Column 2. General Kienmayer with his cavalry will cover the outer flank of this movement.

"Column 2 (18 Russian battalions) —General Langeron—To move by his left from the Pratzen Heights, cross the Goldbach between Telnitz and Sokolnitz, and dress on Column 1.

"Column 3 (18 Russian battalions) —General Prysbyszewsky—To move by his left from Pratzen village, cross the Goldbach north of Sokolnitz, and then move forward west of the river in echelon from Column 2.

"Column 4 (15 Austrian and 12 Russian battalions)—General Kolowrat) — To move by his left in rear of Column 3, cross the Goldbach south of Kobelnitz ponds, then move to his right and bring his troops level with the other columns.

"Column 5 (80 squadrons)—Prince John of Liechtenstein — To move from his position east of the heights behind the present position of Column 3, towards Blasowitz, and afterwards advance south of the main road towards Brunn.

"Column 6 (12 Russian battalions and 40 Russian and Austrian squadrons)—General Bagration—To capture the Santon hill and advance straight on Brunn along the main road.

"General Buxhowden will command the left wing (Kienmayer's cavalry, Columns 1 and 2); General Kutusoff the centre (Columns 3 and 4); Prince Liechtenstein will coordinate his own movements with those of Column 6.

"General reserve (Russian Guard, 10 battalions and 18 squadrons) — The Grand Duke Constantine—To move from its present position to the heights in rear of Blasowitz to support the right wing and be in readiness to undertake the pursuit."

It was nearly 3 a.m. before the column commanders got away from the conference with these complicated orders. In some cases this left insufficient time for the orders to be translated and issued to subordinates before the movements started.

Only Kienmayer and Columns 1 and 2 got away to a good start. Column 5 (Liechtenstein) got mixed up with the rear of Column 3 and the head of Column 4. These two columns were thrown into some disorder, while Liechtenstein had to halt to reorganize. When Bagration (Column 6) got back to his headquarters he found his troops unprepared for immediate action, and a long delay ensued before they could be set in motion.

First Phase.

At dawn on 2nd December Napoleon and his marshals, except Davout, who was at Raigern, assembled on an eminence near the Imperial Guard. As the dense fog cleared from the high ground about 7 o'clock the heavy Russian columns could be seen moving towards the French right, while on the skyline of the Pratzen, Liechtenstein's cavalry could be seen re-organizing and then moving off to the north. To the little group of beholders it was apparent that the battle was going to begin exactly as the Emperor had foreseen.

At the south of the line of battle Kienmayer moved between Lakes Satchan and Manitz to get around the French right. After crossing the Goldbach, however, he was checked by Bourcier and made little progress. Column 1 attacked Telnitz, and a little later Column 2 attacked Sokolnitz. Legrand's men were gradually forced from the villages on to the high ground in rear.

About 8 o'clock Davout arrived with his leading division (Friant) and immediately launched a counter-attack. The villages changed hands several times, finally remaining in Allied possession about half past eight. The guns of Column 3, which had been delayed by Liechtenstein's cavalry, then came up, and under cover of their fire Buxhowden deployed his local reserves for a decisive attack. Fighting magnificently, the French infantry stubbornly held their ground while Davout's gunners, handling their pieces with great skill and boldness, played havoc with the assaulting columns. About 9 o'clock the fighting died down, and Buxhowden drew off his troops to reorganize for another assault.

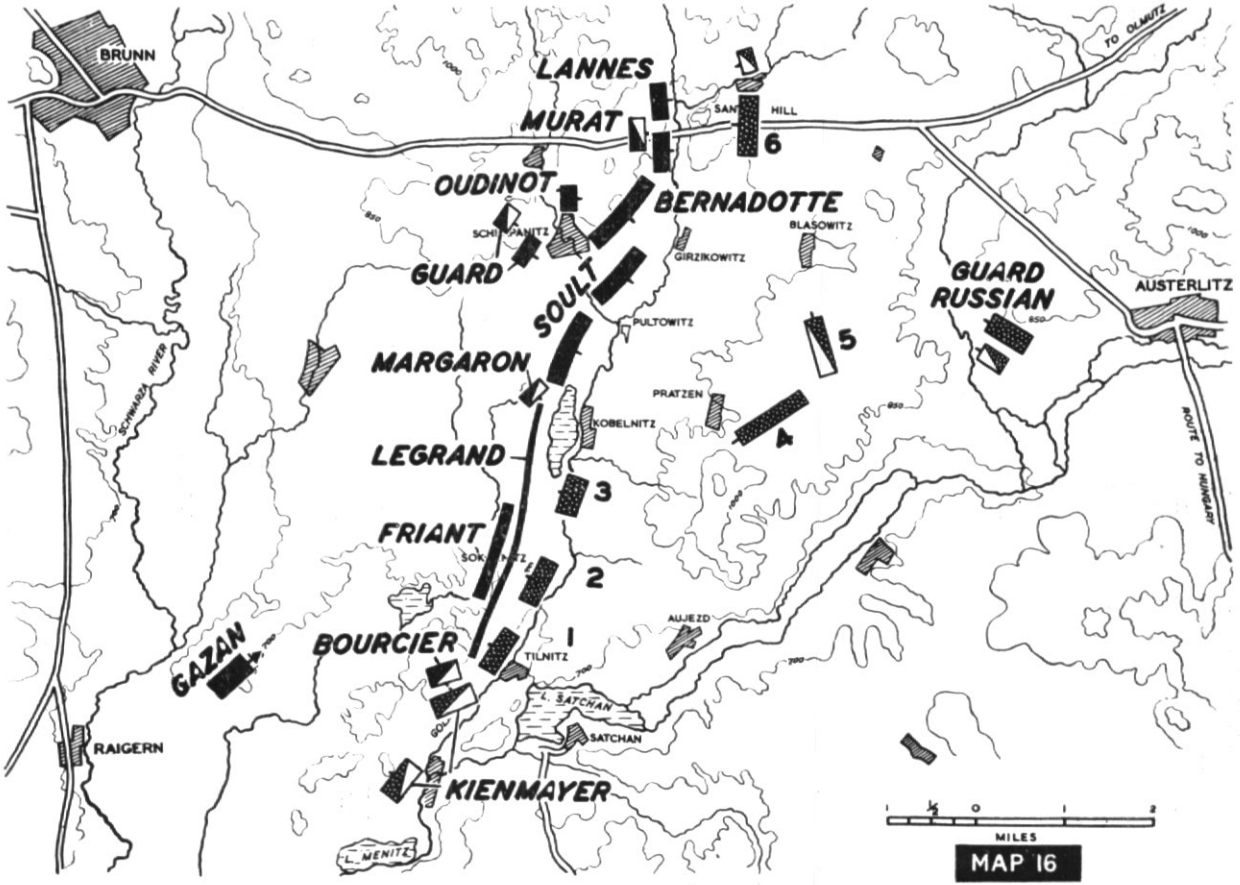
The situation at 9 a.m. is shown on Map 16.

Second Phase.

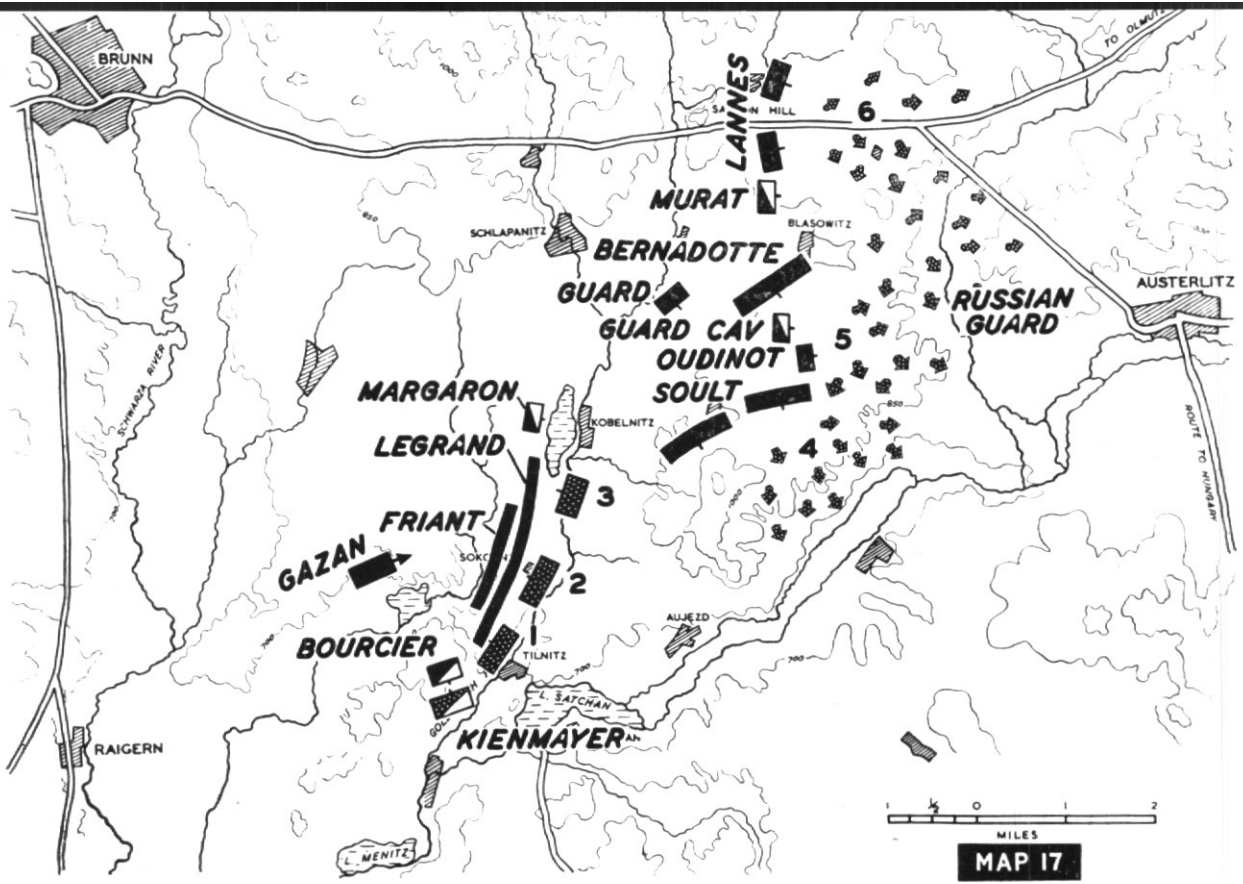
Napoleon watched the enemy columns moving from the Pratzen Heights and their centre gradually becoming denuded of troops. At 8.45 a.m. he asked Soult: "How long will it take you to climb those heights." Soult replied: "Not more than twenty minutes." "Then," said Napoleon, "we will wait another quarter of an hour."

At 9 o'clock Napoleon ordered: "Soult will advance to the heights, his centre directed on Pratzen village. Bernadotte will advance to the heights on Soult's left, with his own left directed on Blasowitz. Lannes will advance and attack the enemy on the Brunn-Olmutz road. Murat will advance in rear of Bernadotte and Lannes. GHQ and the Guard will follow South to Pratzen."

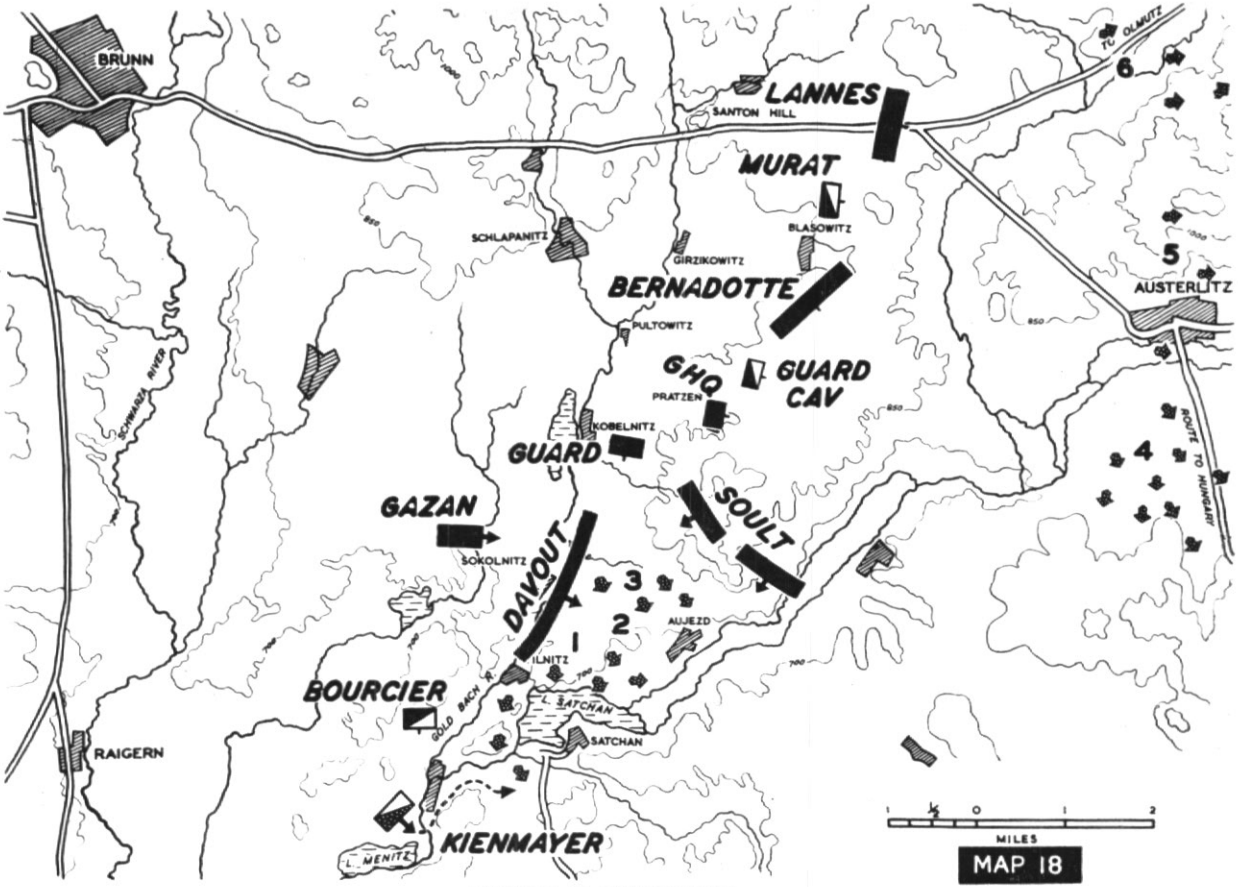
On the eastern slopes of the Pratzen Heights Kutusoff had at last got his Column 4 (Kolowrath) disentangled from the rear of Liechtenstein's cavalry. At Kolowrath advanced in column of route to follow Column 3 he suddenly



Situation 8 a.m. 2nd December



Situation, 12.30 p.m., 2nd December.



Situation at End of Battle.

beheld Soult's leading troops topping the western crest ahead of him. At once realizing the danger, Kutusoff ordered Kolowrath's advanced guard to seize Pratzen village while the remainder attempted to form a line of battle south of the village.

But Soult's divisions came on rapidly and their guns, handled with great boldness, tore the Russians to pieces. The infantry went in with the bayonet, and in less than an hour all that remained of Kolowrath's column were a few scattered remnants withdrawing in hopeless disorder. (See Map 17.)

While this fight was in progress in the centre, Bernadotte, with Murat on his left between himself and Lannes, had advanced on Blasowitz. The Grand Duke Constantine, who, in accordance with his original instructions, had been marching towards Blasowitz in readiness to begin the pursuit, ran head on into Bernadotte's column. Although completely surprised, Constantine attacked at once. While his infantry became closely engaged with Bernadotte's leading troops, he wheeled his cavalry in a furious assault on a brigade which Soult had detached to guard his left flank. The brigade was ridden down, but Napoleon, who had arrived on the plateau with the cavalry of the Guard, threw those troops into a counter-attack, which restored the situation at that point.

On Constantine's other flank Murat gave a masterly demonstration of the correct use of cavalry in battle. From behind the solid ranks of Lannes' right infantry division, he launched in rapid succession a series of furious charges against the wavering Russians. After each charge the horsemen wheeled away to the flanks and returned to reform behind the infantry and repeat the performance. There was always a charge in progress, always another one coming up. After a conflict of varying fortunes the Russian Imperial Guard was broken and driven eastward in wild disorder.

On the northern flank Lannes advanced on either side of Santon Hill and caught Bagration's main body on the Brunn-Olmutz road between the cross fire of his two divisions. Bagration was thrown into confusion and driven from the field with the loss of all his artillery and baggage.

Third Phase.

At about one o'clock, Napoleon, seeing that the battle in the centre and on the left was won, called forward Oudinot's division and the Guard, less its cavalry, which was re-organizing near Blasowitz. These troops were directed against the flank and rear of the Russian Column 3, then on the Goldbach, while Soult, continuing his advance, wheeled sharply to his right towards Aujezd. (See Map 18.)

As soon as the impact of the Guard on the flank of Column 3 began to take effect, Davout, who had been fighting a grim defensive battle on the French right wing, launched a fierce counter-attack. About the same time Soult deployed his artillery on the high ground above Aujezd, his right division captured the village, his left division passed it and swung towards the Russian rear.

Assaulted in front, flank and rear, and pounded by massed artillery, the Allied left simply dissolved. Some tried to cut their way out

towards the south-east, but great masses of them were jammed against the lakes and cut to pieces. Only Kienmayer with his Austrian cavalry succeeded in holding his troops together. With the utmost gallantry he covered the flight, and at the end of the day took up a line of outposts in contact with the enemy.

The French army halted on a line running roughly north and south through Austerlitz. The Allied army had been literally broken to pieces. Its fugitives were fleeing in so many different directions that it was impossible to determine immediately which line the main pursuit should take.

In the morning it was ascertained that the Allies had abandoned their communications with Olmutz and were trying to channel the fugitives on to the road to Hungary leading south-east from Austerlitz. Napoleon, in ordering all available formations to take up the pursuit, wrote to his marshals: "In war nothing is accomplished so long as anything remains to be done. As long as more can be done no victory is complete."

In the battle the Allies lost some 30,000 men, while the French losses were rather less than 12,000.

On 4th December the Austrian Emperor presented himself at the French outposts and was conducted to Napoleon. As a result of the interview the Russians agreed to go home and the Austrians agreed to sign a peace treaty dictated by Napoleon before the end of the month.

By the treaty of Pressburg, signed on 26th December, Austria ceded the Dalmation provinces to France, Venice to the French puppet kingdom of Italy, the Tyrol to Bavaria, and other territories to Baden and Wurtenburg. Prussia hastily took a conciliatory line, while Holland and Naples became kingdoms in the French system.

Comments on the Battle.

The disagreement amongst the Allies prior to the battle is but one more illustration of the difficulty of obtaining firm, clear-cut decisions unless a supreme military command has been established by the political authorities. Unless this command has been set up and its authority delineated, and unless it has been given a clear directive, disagreement, argument and unsatisfactory compromise in the direction of operations will almost invariably result.

In the case under review the Allies' proper course was to avoid battle for the time being. Every day they gained would have increased their strength, while diminishing that of their opponent, in all probability to the point where he would have been compelled to withdraw beyond the Rhine. They had everything to gain and nothing to lose by delay. Yet they allowed themselves to be committed to battle by a few romantically-minded hotheads.

The disagreement and uncertainty was reflected in their march from Olmutz to Austerlitz. They moved so slowly, with such ponderous deliberation, that they threw away all possibility of surprise. They gave Napoleon all the time he needed to concentrate his forces and make detailed arrangements for their reception.

Although they had some 16,000 cavalry the Allies went into action

in ignorance of Napoleon's disposition, and even in considerable doubt about his location. Their cavalry neither attempted reconnaissance nor effectively screened their own movements. In contrast, Murat's numerous patrols, taking advantage of every scrap of cover, fed a constant stream of information to French Headquarters.

The Allied plan was far too complicated, and completely lacking in flexibility. The action of every column was closely tied to and dependent on the actions of several other columns. Even to get into position columns had to cross each other's line of march, on unfamiliar ground and in the half light of early morning. Movements like this require the most meticulous staff work, and the Allies simply did not have a staff. In any case the orders were issued too late for any staff work to be undertaken, they were even too late to be translated.

Had the Allied commander paid the least attention to the terrain he must have realized the tactical importance of the Pratzen Heights. He had those heights firmly in his possession. Yet, without knowing where his opponent was, he directed his army to move to its flanks and leave the feature completely unoccupied. The fact that there were troops there when Soult arrived was due entirely to an accident.

The Allies' tactical plan flagrantly violated the Principles of Surprise, Flexibility, Security and Concentration. From first to last Weyrother appears to have taken no account whatever of the enemy, and to have conducted his operations like a parade-ground manoeuvre. How else can we account for his decision to march closely and openly across the front of the most efficient army in Europe, commanded by a man whose skill, enterprise and energy had already won him great renown?

Napoleon correctly appreciated the confusion of counsel in the Allied high command, and skilfully played upon that confusion to lead them into a course of action he desired. Further, by concealing his strength at one point and displaying it at another, he led them on to the ground which he had selected for them to attack.

Through careful reconnaissance in company with Napoleon, all the French commanders were familiar with the ground on which the battle was to be fought. Napoleon's intentions had been discussed in detail on the ground. Consequently, when the time came there was no need for detailed orders. When the signal was given each marshal knew what he had to do, and he knew what the other marshals would be doing at the same time.

Napoleon's plan was quite simple. It should be noted that his initial orders for the counter-attack legislated only for the capture of the heights, giving no more than an indication of the course each marshal would probably be required to follow in the next phase. Napoleon arrived on the plateau on the heels of Soult, ready to intervene instantly with the cavalry of the Guard in any unforeseen development. Then when Soult and the main body of the Guard were launched against the Allies' left rear, he had Bernadotte, who had completed his task, in reserve on the heights. By these means Napoleon not only kept the battle moving without pause, but retained firm control of it from first to last.

Perhaps the most notable episode in the whole battle was the finesse displayed in judging the exact moment for the counter-stroke. Every minute allowed the Allies to become inextricably involved with his right wing made their eventual destruction more certain. Yet there was always the chance that the Allies, by sheer weight of numbers, might crush Davout, and thus open the way for escape. Only a man of iron resolve could have waited that last quarter of an hour.

Napoleon's plan fulfilled the Principles of Surprise, Concentration, Security, Flexibility, Co-operation, Economy of Effort and Offensive Action. Strategically and tactically, Austerlitz remains one of the best examples in history of the defensive-offensive battle.

Comments on the Campaign.

In the space of three months the Grand Army marched across Europe, forced the capitulation of one army, destroyed another one, occupied the enemy's capital and much of his territory, smashed a powerful coalition, and dictated peace on its own terms. Considering that there were no railways, motor transport or telegraph, that the Army had to walk all the way, the modern exponent of the blitzkrieg has nothing to boast about.

If it were possible to ascribe the remarkable performance of the Grand Army to any single cause, apart from the genius of its commander, we could perhaps say that its success was due to the fact that it was the only army of its day which possessed a general staff in the true sense of the term. The organization and functions of the Grand Army's Staff was described in detail in "The Rise and Development of the General Staff System," by Major E. W. O. Perry, in AAJ, No. 4. As Major Perry pointed out, Napoleon employed on his staff the cream of the bravery and talent available in the Grand Army. These men got through an astonishing amount of office work, for they had the affairs of an empire to consider as well as the campaign on which they were engaged, yet they rarely spent more than one third of their time at their desks. Napoleon's success was due in no small measure to the energy, efficiency and resourcefulness of the staff he gathered about his headquarters.

A notable feature of the campaign was Napoleon's use of his cavalry for deep and medium reconnaissance and for screening his own movements. In this he was eminently successful and ahead of any other commander of his day. Nevertheless, in reflecting on the lessons of the campaign he arrived at the conclusion that his system was deficient in one thing — his cavalry could reconnoitre, screen and pursue, but it could not hold the enemy to his ground. From this discovery he evolved the advanced guard of all arms, a body of troops which could not only find the enemy, but pin him to ground, and thus establish a fixed point about which the main body could be manoeuvred. Much of his subsequent success was due to the application of this tactical idea.

* * * *

In his earlier campaigns Napoleon had commanded relatively small forces, seldom more than 30,000 men. Austerlitz was the first battle in which he had handled large numbers, and the "Intoxication of Victory" appears to have gone to

his head. In the following year he took another deep draught of this heady intoxicant when he crushed Prussia in the whirlwind campaign of Jena.

It seems fair to say that up to that time Napoleon's campaigns, although offensive in the military sphere, had been brought about by the sheer necessity of defending republican France against the attacks of nations bent upon restoring the old order. It seems equally fair to say that after Austerlitz and Jena he took the political as well as the military offensive, and that he set out to impose his will and his peace upon Europe, and perhaps upon the world, by force of arms. Henceforth he saw in the bayonet the solution to every international difficulty that arose. He was neither the first nor the last ruler to discover, amidst the ruins of his country, that more, much more, than that is required to build a just and lasting peace.

Perhaps in the lonely, brooding years of exile at St. Helena, Napoleon grasped the inner truth of his own statement: "There is one thing you cannot do with bayonets, you cannot sit on them."

[Concluded]

ON ARMY EDUCATION

2 — Making it Work

Major A. W. John, Director of Army Education, AHQ.

"He who knows and knows he knows
He is wise — follow him.
He who knows and knows not he knows
He is asleep — wake him.
He who knows not and knows not he knows not
He is a fool — shun him.
He who knows not and knows he knows not
He is a child — teach him."

THIS Arab proverb suggests the limitations of the field of adult education and not only in the Army. How many people anywhere, not knowing, will admit to not knowing, and, admitting, summon the effort to learn? Some prior assessment of this state of things will save us all a good deal of frustration.

It often happens that people who have great goodwill towards education in the services have a misconception of the problems involved. Once in Japan we had a suggestion that we should endeavour to get all the troops we could enrolled in correspondence courses in order to keep them out of mischief! It is not quite as simple as that. The problem is not so much to get members enrolled as to get them to work through their courses to completion.

On the other hand, one often hears the argument: "The men don't want it!" It is worth mentioning because the unwary enthusiast tends to rush to the equally absurd extreme by trying to prove that "All the men want it." This sort of thing is like name calling; it gets us nowhere.

Children do not want school! If put to the vote of the majority decision, we might be led into doing

away with our art galleries, public libraries, concert halls, museums and even our universities. But, fortunately, it is not a matter of whether the majority want these things.

The most determined philistine knows that there is some demand, however limited. The rest of us should never deceive ourselves that there is any greater proportion of men in the army than out of it spontaneously seeking further education. The purpose of the AAEC and all who co-operate with us is to encourage and expand the demand on the principle that more light is better than total darkness.

The demand in any given unit might be negligible, but introduce the enthusiasm of one or two members who believe in education and have the stamina that outlasts indifference, cynicism and other discouragements and there will be a considerable increase. The extent of the increase depends upon the readiness of members to co-operate with the Unit Education Officer. Where the "unit attitude" is positive rather than negative much can be achieved. Even so, it is better not to be overambitous. An hour tacked onto an administrative parade once a fortnight for a lecture is more likely to be successful than calling a night parade every week. It is also a more effective method than assembling a few off-duty men from time to time.

Suitability of time and place should always be considered. There was the case of the battalion which started a winter education programme with a reasonable amount of enthusiasm. It lagged, and there was much discontent. We found that they were literally chasing their troops out of bed and into class rooms first thing in the morning. The programme never really recovered from this unfortunate start.

On the other hand we might describe the formal education programme of a US negro regiment stationed at Gifu, Japan, during the Occupation. A "Literacy Training Plan" was put into operation in August, 1948, on a company basis. 205 men were formed into a company, with an executive officer and platoon leaders. The cadre company accommodation and a school building were taken over and a teaching staff organized, consisting of eight enlisted men and three dependants. The object was to raise the men's educational level to the equivalent of Fifth Grade, and by mid April, 1949 (eight months later), 800 men had been graduated. The system was then revised and the educationally retarded men were formed into a heavy mortar company, 140 strong. Besides normal army training, this company devoted special attention to schooling, mainly in English and Arithmetic. The rate of progress was approximately one grade a month. The company had a good sports record and had been rated the best on parade, so that there was little tendency for other members of the regiment to speak slightingly of them.

The question of whether attendance should be voluntary or compulsory is often discussed. As has already been indicated this is largely a question of circumstances. In the war days we had a weekly lecture fixture on a voluntary attendance basis with an engineer unit in the New Guinea jungle. It used to draw over 90 per cent. attendance. This led to the curious

situation wherein some of those who attended wanted attendance made compulsory so as to get all the others in!

A certain amount of educational activity in duty time should be on a compulsory basis. Lecture-discussions on important national or international affairs justify this treatment, provided the lecturer is competent and well versed in his subject. There is less reason why members should be compelled to attend a lecture in what is normally regarded as "off-duty" time, although some circumstances may make it desirable.

As to class tuition, compulsory attendance should only be resorted to in normal duty time over short periods for a specific purpose, as, for instance, to test the individual's suitability to undergo a course of instruction. Nothing lowers the morale of a teacher more than to be faced with a row of sullen "unteachables." However, it is a sound principle that when a man voluntarily engages in a course of lessons, he should be obliged to see them through. We have yet to meet the man who has successfully completed a course who has not thereby achieved some personal sense of achievement and therefore of satisfaction.

Now, an "unteachable" man is an incentiveless man. This question of incentive is all-important in learning anything. The incentive might be a desire for promotion, for an accurate knowledge of national or international affairs, to develop some cultural interest, or even to acquire an ability to do odd jobs about the home. Whatever shape it might take, incentive is the key to education.

What implants incentive? Whether it be the requirements for a coveted position, a respect for the truth, a desire to repair a shortcoming of personality revealed perhaps through a romance or a friendship, or merely a need to save money, incentive is sown and attention focussed on the means of achieving the desired fruition.

Apart from the personal incentives already analysed there is one other which might be used to stimulate informal activities, such as debating, craftwork and essay writing. This, of course, is through the award of trophies, prizes or privileges. This sort of incentive is not the most satisfactory and, in any event, its effect is usually short-lived.

Now, let us return to consider the unit with the negligible demand for education and see what happens with the right leadership. Then there is a library, used by say, 25 per cent. to 30 per cent. of members (our AAEC records indicate this) even if only for reading newspapers and magazines. There is a quiet room for students, well away from the canteen and other distractions. Possibly 5 per cent. of members are studying correspondence courses in connection with promotion requirements, and a further 1 per cent., or 2 per cent., studying subjects other than for promotion. Practically all members attend a fortnightly lecture on current affairs. In this particular unit there happens to be a handyman with tools interested, let us say, in toy making. A group is formed to make toys for Christmas. Half the married men join and a dozen younger men, for who does not want to give a child a toy at Christmas (Another good idea in the

craft department is the Handyman Course, as run by the Royal Navy Education Service, comprising house repairs, boot repairing, electric wiring, upholstering, and so on.)

Hidden talent in a unit, a couple of hundred strong, is often quite surprising. The education programme might well be preceded by a talent quest. The scope, particularly in craft work, will vary from unit to unit.

Another point which is worth mentioning is that the tempo should be varied. Courses should all have a finishing point as well as a starting point. Nothing should be allowed to "drag on." If the right duration for an activity is determined, phase two, after an interval, should be as effective as phase one at the outset.

The functions of the AAEC concerning purely unit education programmes are to provide advice and assistance, both as to tuition (lectures, etc.) and materials. To serve all units and to provide for smaller units who can achieve very little in the way of organized activities on their own, area education centres are needed. On the whole, the greater numbers participating provide wider scope though the cohesive factor in unit programmes is lacking and a lot more advertising and persuading is necessary.

To illustrate the possibilities we might mention our Kure House Education Centre for the BCOF, Japan. Here, in addition to the library, reading and classroom accommodation, we provided a focal point for a wide variety of informal activities. For much of the time, most of these activities were organized through clubs of a semi-autonomous nature. There were clubs for drama, play-reading, art, music (including a choir), photography and touring. Each lasted for a period of years through changing fortunes, and had a greater or lesser degree of success. In its hey-day, the drama club — "Little Theatre Players" — toured all BCOF units throughout Japan playing "The Hasty Heart" and "Rope," whilst the BCOF Tourist Club only packed up after the onset of the Korean War and its two-hundredth trip.

In case any reader should be in doubt as to the educational value of touring Japan, it should be noted that Hiroshima and Nagasaki were included, as well as the top of Mount Fugi, and that visits were made to factories, mines and hydro-electric and other industrial plants. The club had weekly general meetings to discuss tours, and members submitted articles for our monthly journal—"Gen."

Beyond area educational centres, there is a logical further step to Command education centres, where short full-time courses could be run. These could cover such special needs as the schooling of illiterates, the training of unit education officers and full-time E.Os., the provision of courses in public speaking and discussion group method, also rehabilitation requirements as the need arose. This is a somewhat visionary field at present. Like many other things, it awaits that somewhat elusive factor, a period of stability.

As the reader has observed, we take the broader view of education, not merely as a matter of basic schooling, important though that is, but as a matter of helping to "train the whole man." As to formal education, there is the basic need

of a sound grounding in the use of the language, written and spoken. As Bacon has expressed it — "Reading maketh the full man, writing the exact man, and conference the ready man." We may also recognize that many an adult attempting the more complicated processes of reasoning, finds himself stumbling for lack of that mental discipline only acquired through frequent and long attention to exactness of expression in the language, or concentration on complicated mathematical problems. In the field where the term "information" can be appropriately applied is the matter of increasing understanding of national and international affairs through reading, listening, and discussing. Finally, there is the cultural field, where art and craft find expression in a multitude of ways from, say, the organisation of a dramatic club to the running of a handyman course.

To those of us engaged in the work, there is no doubt as to its value and national importance. This may not be so readily apparent to the busy officer and NCO preoccupied with problems of training in purely military subjects. This aspect of the subject will be dealt with in the third and final article of this series.

The Moon in War and Training.

An error occurred in the article "The Moon in War and Training," which appeared in AAJ No. 39. The last paragraph on page 28 should read:—

"(a) In Melbourne the sun in mid-summer rises and sets well SOUTH of the EAST-WEST line. The further SOUTH the latitude the further SOUTH of EAST the sun rises and sets in summer."

Amend your copy now!

Reflections on . . .

AIR SUPPLY of ENCIRCLED UNITS

Translated and condensed by the "Military Review," USA, from an article by Dr. Theodore Weber in "Flugwehr und -Technik," Switzerland, October, 1951.

THE basic requirements for the adequate air supply of army units surrounded by the enemy may be stated as follows:—

1. A sufficient number of transport planes.

2. A dependable ground organization (personnel, equipment, and airfields) outside of the ring of the encirclement.

3. A dependable ground organization (personnel, equipment, and airfields) inside of the encircled area.

4. Air superiority over the operational area.

With respect to the first requirement, the number of planes needed for an air supply operation depends on the needs of the encircled forces in the way of rations, ammunition, and motor fuel. However, as a rule of thumb, it may be assumed that a minimum daily requirement of 2.2 pounds of rations, and an equal amount of ammunition and motor fuel, will be needed for every man involved. According to this, if there are 300,000 men to be supplied by air (such as at Stalingrad), a minimum of 600 tons of supplies daily must be brought in by air. If the capacity of each plane is 2 tons, then 300 flights each day are necessary.

With respect to the second requirement, the ground organization must be of such a nature that the number of planes required for the operation can be manned, serviced, and accommodated without delay. In addition, the airfields must be protected against possible air or ground attacks by the enemy.

The remarks made above in regard to the second requirement apply in all respects to the third requirement.

The fourth requirement is self-explanatory and does not require further amplification.

The Air Supply of Stalingrad.

Was the *Luftwaffe* able to meet these basic requirements in its operations to supply the German Sixth Army, which was encircled at Stalingrad? The answer to this question was given by the Chief of Air Supply, Brigadier General Fiebig, and the commander of the German 4th Air Fleet, General von Richthofen. Both of these officers considered an adequate air supply at Stalingrad impracticable, and tried, at every opportunity, to convince Hitler that the Sixth Army should attempt a break-out from encirclement. Hitler, however, left the Sixth Army on the Volga, having been assured by Göring that the *Luftwaffe* would have no difficulty in supplying it by air. (The minimum daily requirements for the Sixth Army were set at 300 tons.) That Göring gave this assurance is maintained by Field Marshal Milch, and the Air Transport Commander of the *Luftwaffe*, Lieutenant General Morzik. However, it is not clear from what source Göring obtained the basis for such an assurance. Possibly, it was the successful air supply of Demyansk, which had been carried out the year before, but which represented only about a third of the effort required at Stalingrad.

Available Aircraft.

At the beginning of December, 1942, the German Eighth Air Corps (Fiebig), which had been assigned the air supply operation at Stalingrad, had at its disposal the following formations: 11 transport groups of Ju-52s (a total of some 200 planes), with a load capacity of 2 tons for each plane; 2 transport groups of Ju-86s (around 20 planes, but soon withdrawn from the operation), with a load capacity of 1½ tons for each plane; and 6 transport groups of He-111s (a total of some 100 planes), with a load capacity of 1½ to 2 tons for each plane.

Principal Airfields.

The principal take-off bases for the operation were at Tazinskaya airfield (Ju-52s), 150 miles from Stalingrad, and at Morosovskaya airfield (He-111s), 155 miles from Stalingrad.

The equipment mentioned above would have been sufficient for bringing in about 300 to 450 tons of supplies each day, as long as all planes continued to be operational. And even before the evacuation of the two principal airfields outside of the encirclement (Tazinskaya and Morosovskaya), which was forced by the advance of the Soviet forces, during the end of December, there were still 180 Ju-52s and 150 He-111s on the airfields. The theoretically required number of planes was still on hand. In the middle of January, 1943, there were 280 transports still available, and, by the end of that month, the number had increased to 363. From these figures, we can deduce that the Germans never fell below the minimum number of aircraft required for the supply operation, and that the German aircraft industry was able to replace the planes which were lost.

Operational Readiness.

However, it is doubtful whether the *Luftwaffe* High Command realized how rapidly **operational readiness** could decrease (especially in winter), and how little **operational strength,** by itself, really meant. It is operational readiness that is decisive in war, and this is usually considerably lower than operational strength.

With regard to the operational readiness of the German transport planes during the Stalingrad operation, the following is significant:

At the beginning of December, 1942, out of a total of 320 planes on hand, only 80 to 90 per cent. were operational.

At the end of December, 1942, out of a total of 330 planes on hand, approximately 50 per cent. were operational (exact figures for this period are not available).

Around the middle of January, 1943, out of a total of 280 planes on hand, only 25 per cent. were operational.

At the end of January, 1943, out out of a total of 363 planes on hand, only 35 to 40 per cent. were operational.

At the beginning of February, 1943, out of a total of 363 planes on hand, only 10 to 20 per cent. were operational.

To have maintained the requisite number of planes at 100 per cent. operational readiness would have required more than 1000 transport planes, and the German aircraft industry was not capable of such an achievement at that time. For example, during 1943, only 887 Ju-52 transport planes were built.

What was the cause of this low operational readiness? The two principal reasons may be listed as bad weather — with its resultant snow-covered runways, extremely low temperatures, and icing conditions — and a lack of equipment for warming the engines and de-icing the aircraft.

Air Activity.

Starting around the first part of December, 1942, air battles over the encirclement became more and more frequent, because the Soviet Air Force was attempting to prevent the arrival of supplies into the encircled forces. However, up to this time, the Germans seemed to have had air superiority. Also, beginning about the same time, bad weather was making itself felt in the operation of the *Luftwaffe*, and this reduced the number of missions which could be flown each day. For example, on 5 December, 1942, only 28 planes flew into the encirclement. The high point of the air supply operation was reached on 19 December, 1942, when 154 planes flew in with 290 tons of supplies; but this was still 10 tons short of the estimated minimum requirements for the Sixth Army.

A few days previously, a relief army (the German Fourth Armoured Army) had launched attacks in an effort to reach the encircled force. In spite of the efforts of the relief army, the continuation of the air supply and the attacks of the German bombers were considered vital prerequisites for effecting the break-out, but bad weather decreased bomber and transport activities appreciably.

Forced Withdrawals.

On 25 December, a series of withdrawals was made to keep the airfields outside of the ring from being overrun by the Soviets. This increased the operating distance of the Ju-52s by some 117 miles, and the He-111s by some 93 miles. At the same time, Soviet air attacks on the airfields increased the losses of the German transport planes.

To offset these losses, new long-range planes were delivered from Germany. They were Fw-200s, He-

117s, and Ju-290s, all of which revealed certain defects. As an example, the Fw-200s had too great a rate of fuel consumption, and were plagued with carburettor troubles, which resulted in many of them catching on fire.

In order to cope with Soviet air superiority, the fighters of the 4th Air Fleet were reinforced with additional aircraft. However, Soviet air activity soon brought about the disintegration of German fighter aircraft, and the Ju-52s and Fw-200s were forced to suspend operations during daylight hours. Only the He-111s were still able to fight their way through to the encircled forces, but, even at that, they were unable to land within the encirclement. From 18 January on, air supply was possible only by dropping containers by parachute.

Conclusions.

During the entire air supply operation at Stalingrad (from 24 November, 1942, to 31 January, 1943) 4,500 to 5,000 flights were completed, 6,591 tons of supplies were delivered (approximately 96 tons a day), and 50,000 wounded troops were evacuated from the encirclement.

Although some 500 aircraft were lost during this operation (which, from the standpoint of numbers only, was equal to the entire German aircraft production of transport planes during 1942), it did not achieve its aim and purpose; the air supply of the German Sixth Army until the arrival of relief forces. There is no need of repeating the reasons for this failure. The air supply of Stalingrad bore, from the very beginning, the characteristics of a gamble, because the *Luftwaffe* High Command ignored the requirements for the successful completion of such a large undertaking. German aircraft production was not adequate for the maintenance of the operational readiness of the transport fleet. A secure ground organization, both outside and inside of the encirclement, did not exist, even during the initial phases of the operation. In addition, although the Germans had air superiority in the beginning, the Soviets were able to take over control of the air and retain it.